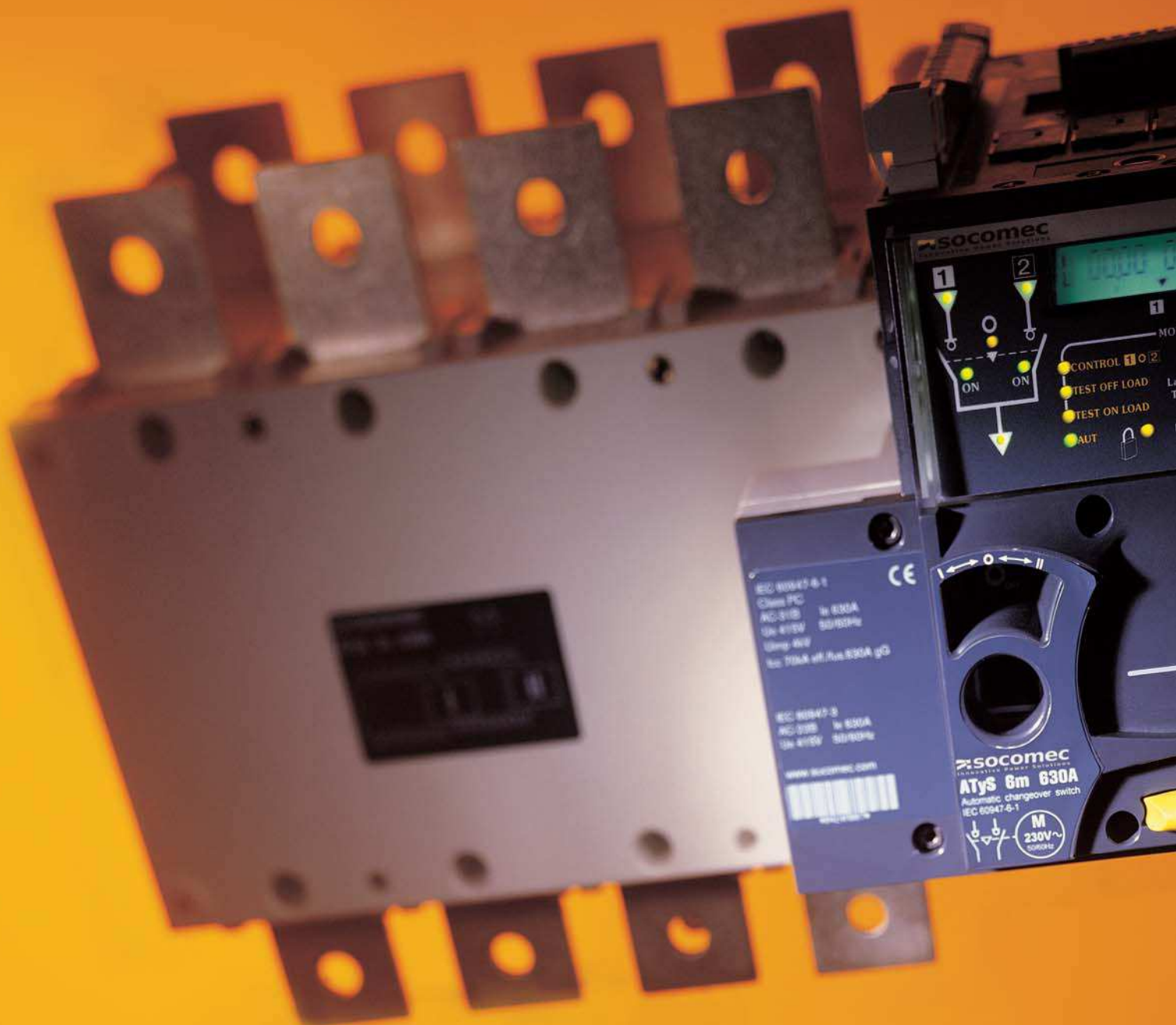


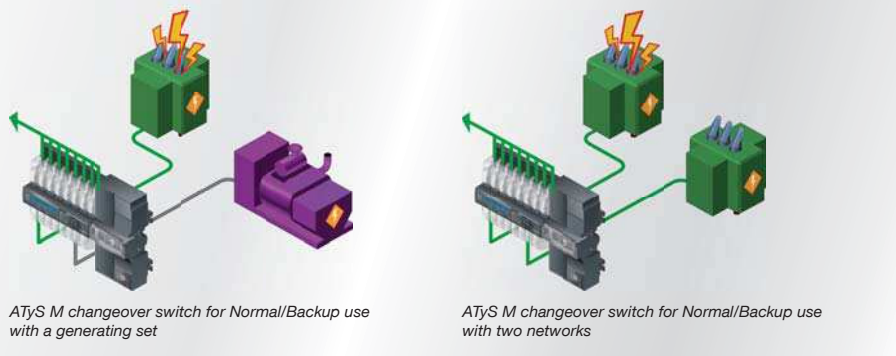
Changeover switches



Switches, controller and monitoring software

Providing an unrivalled benchmark in source switching, SOCOMEC is continuously innovating to ensure ever more efficient ways to guarantee the continuity of distribution and, therefore, the rate of availability of your energy.

From the 'small' COMO C manual changeover switch to the ATyS 6 automatic changeover switch, the range of switches covers, as standard, a large proportion of needs.



All these switches are also available enclosed.

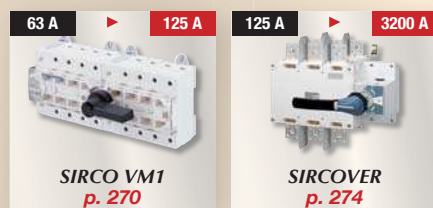
Discover all of our products in our selection guide on the next pages.

The experience we have gained from different projects has led us to develop numerous special products (make before break contact or mixed pole motorised changeover switches, etc). Please do not hesitate to contact us for more details. Trust the experts with all your applications - even the most critical!

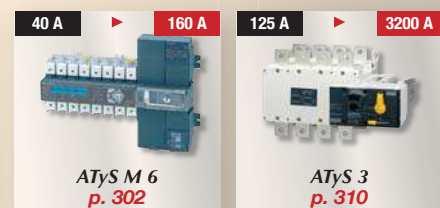


The essential

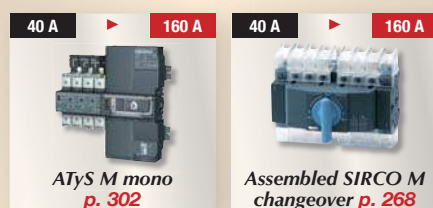
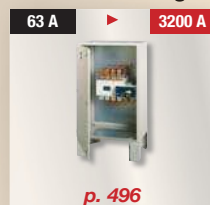
Manual changeover



Motorised changeover / Automatic Transfer Switches (ATS)



Enclosed changeover switches



New



➔ Discover our complete selection guide (see next page)

➔ Need a suggestion? We will help you find the best solution for your application.

➔ A special requirement? SOCOMEC makes specific products. Please feel free to consult us.

Choosing the right changeover switch



SOCOMEK changeover switches can be used not just for Normal/Backup operation, but also for managing the switching of loads or the connection of equipment to earth.

In addition to the rating and the related electrical breaking specifications, the selection criteria are:

- type of **control**,
- **visible breaking**,
- **installation constraints** inside the enclosure.

Please do not hesitate to contact us for suggestions or any specific requirement: We adapt our products to your specific requirements.

➤ Products for **all switching applications** from 25 A to 3200 A

• Applications with **2 interlocked switches**

Source transfer: manual or automatic switching (ATS) between two sources, either transformer or generating set (*fig. 1*).



Fig. 1



Fig. 2

Earthing of equipment such as motors or electrical lines reserved for signalling, whilst isolating them from their power supply in a fail-safe way (*fig. 2*).



Fig. 3



Fig. 4

Inversion of loads: switching of the power supply from one load to another load in order to ensure that they both age at an equal rate (*fig. 3*).

Inversion of phases on motors: inversion of the succession of phases supplying a motor in order to modify the direction of rotation (*fig. 4*).

• Application with **3 interlocked switches**

UPS 'BY-PASS': isolation then bypassing of a secure UPS type power supply using 3 interlocked breaker switches assembled very close together (*fig. 5*).

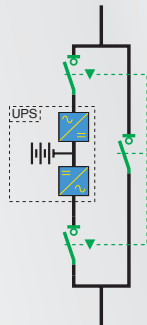


Fig. 5

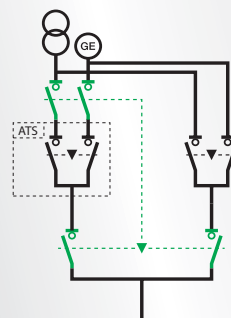


Fig. 6

• Application with **4 interlocked switches**

Solution 'ATS BY-PASS': upstream and downstream disconnection of an ATS function (automatic switching) while guaranteeing the continuity of the distribution via a 'BY-PASS' branch. Carried out using a single operating handle, this operation allows the ATS function to be separated for maintenance, in complete safety.

Linked to a switching function, the bypass branch means it is still possible to select the sources in the event of a failure of one of them (*fig. 6*).

Selection guide

Manual Changeover

Manually controlled multipolar switches



BY-PASS switches for better maintenance of the installation

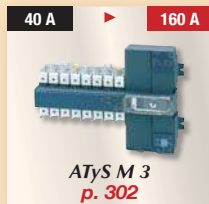


Need an enclosed switch?

See our complete range in the section on "Built-in products"

Motorised Changeover

Modular frame



Back to back frame



N.B.: Automatic changeover switches designed especially in accordance with IEC 60947-6 will exclusively comply with the switching of sources on security installations as defined by NFC 15100 § 5-56 standard (emergency lighting, smoke control, high-rise buildings, etc.)

UL range



Universal ATS controller

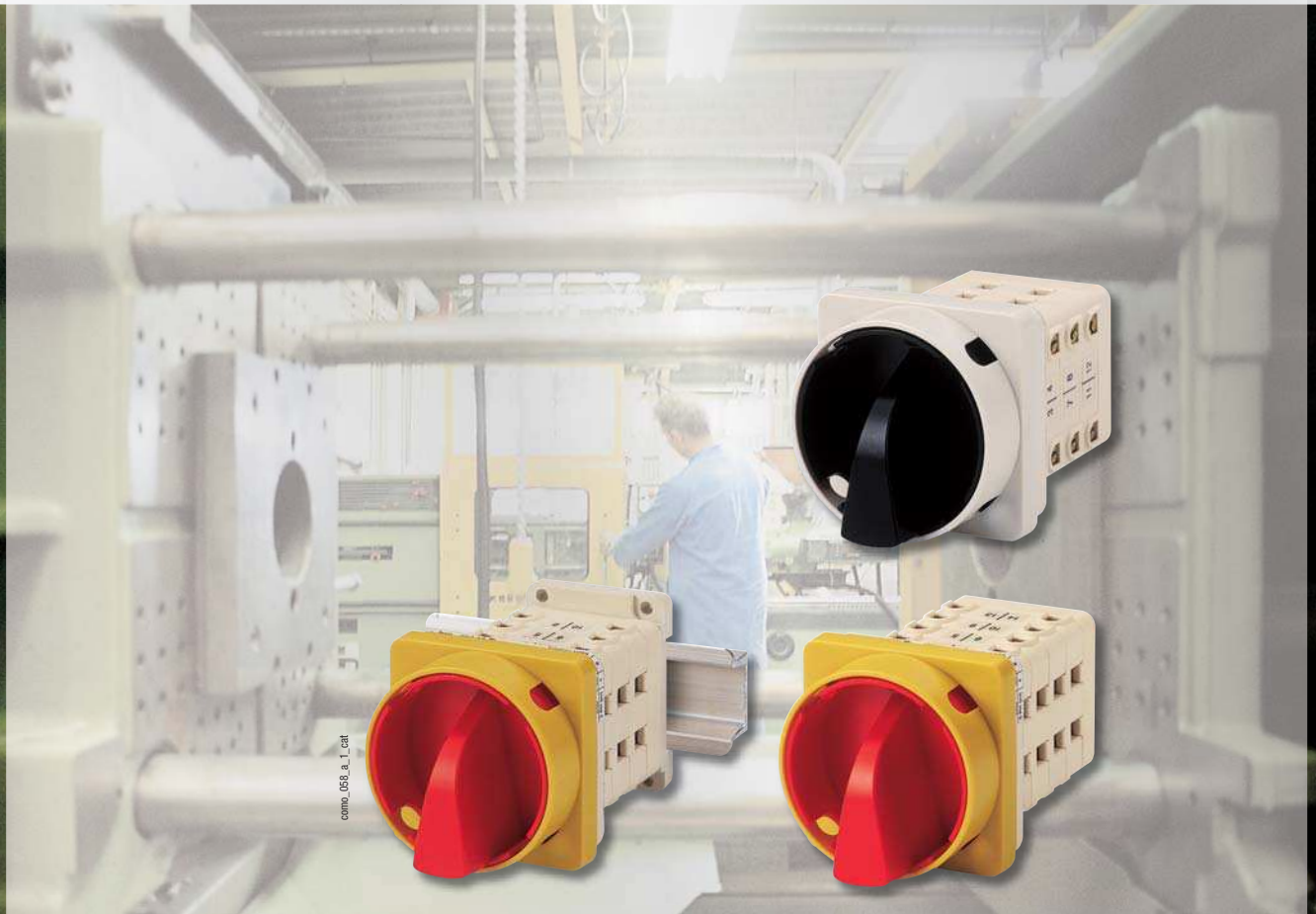
Automatic control of different switching technologies: circuit breakers, contactors, switches.



Monitoring software

ATyS VISION displays the parameters for the ATyS changeover switches and allows them to be remotely configured.





Machine Changeover 25 to 100A

➤ Function

COMO C are manual multipolar changeover switches. They provide changeover, source inversion or switching under load between two low voltage power circuits, as well as their safety isolation.

➤ General characteristics

- Fully visualised breaking.
- Fully integrated bridging bars.

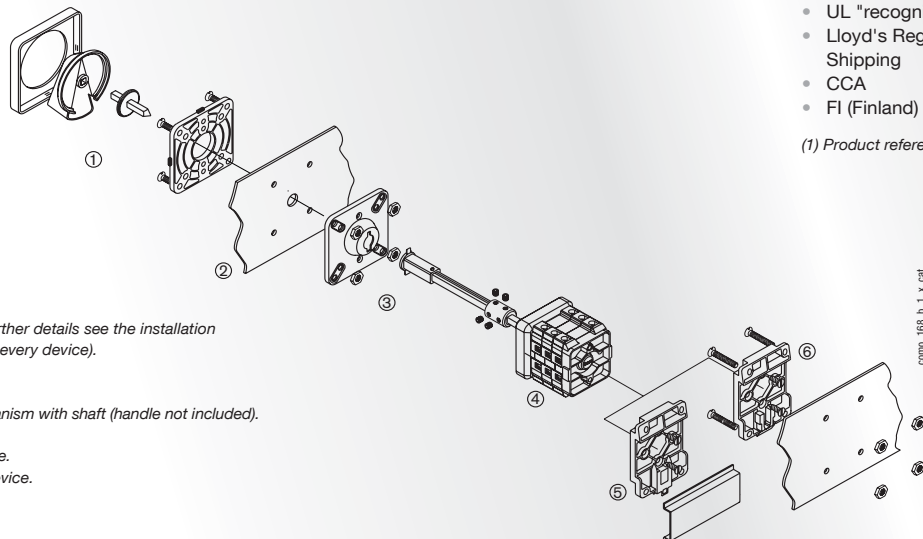
➤ Conformity to standards

- IEC 60947-3
- IS 14947-3
- EN 60947-3
- VDE 0660-107 (1992)

➤ Approvals and certifications⁽¹⁾

- BBJ Poland (Attestation of verification)
- UL "recognized"
- Lloyd's Register of Shipping
- CCA
- FI (Finland)

(1) Product reference on request.



Functional diagram (for further details see the installation instructions supplied with every device).

1. IP54 handle.
2. Enclosure door.
3. Door interlocking mechanism with shaft (handle not included).
4. Switch body.
5. DIN rail mounting device.
6. Back plate mounting device.

References



como_106_a_1_cat

Rating (A)	No. of poles	Switching type	Switch body	Padlockable handle IP54	IP54 non-padlockable white handle	Shaft and escutcheon for external handle	Mounting kit	IP65 gasket
25 A	3 P	I - II	4220 3002 ⁽¹⁾	Black/Grey 4259 1042	I - II 4259 2022	200 mm 4259 5042	DIN rail mounted 4259 9001	4299 5001 ⁽²⁾
	4 P	I - II	4220 4002 ⁽¹⁾					
	3 P	I - 0 - II	4230 3002 ⁽¹⁾					
	4 P	I - 0 - II	4230 4002 ⁽¹⁾					
	3 P	I - I+II - II	4240 3002 ⁽¹⁾					
	4 P	I - I+II - II	4240 4002 ⁽¹⁾					
	3 + 6 P	BY-PASS I - 0 - II	4250 3002					
	4 + 8 P	BY-PASS I - 0 - II	4250 4002					
40 A	3 P	I - II	4220 3004 ⁽¹⁾	Red/Yellow 4259 1043	I - II 4259 2042	200 mm 4259 5042	Board mounted 4259 9040	4299 5001 ⁽²⁾
	4 P	I - II	4220 4004 ⁽¹⁾					
	3 P	I - 0 - II	4230 3004 ⁽¹⁾					
	4 P	I - 0 - II	4230 4004 ⁽¹⁾					
	3 P	I - I+II - II	4240 3004 ⁽¹⁾					
	4 P	I - I+II - II	4240 4004 ⁽¹⁾					
	3 + 6 P	BY-PASS I - 0 - II	4250 3004					
	4 + 8 P	BY-PASS I - 0 - II	4250 4004					
63 A	3 P	I - II	4220 3006 ⁽¹⁾	Black/Grey 4259 1082	I - II 4259 2082	200 mm 4259 5082	DIN rail mounted 4259 9001	4299 5002 ⁽²⁾
	4 P	I - II	4220 4006 ⁽¹⁾					
	3 P	I - 0 - II	4230 3006 ⁽¹⁾					
	4 P	I - 0 - II	4230 4006 ⁽¹⁾					
	3 P	I - I+II - II	4240 3006 ⁽¹⁾					
	4 P	I - I+II - II	4240 4006 ⁽¹⁾					
	3 + 6 P	BY-PASS I - 0 - II	4250 3006					
	4 + 8 P	BY-PASS I - 0 - II	4250 4006					
80 A	3 P	I - II	4220 3008 ⁽¹⁾	Red/Yellow 4259 1083	I - 0 - II and BY-PASS 4259 3082	200 mm 4259 5082	Board mounted 4259 9080	4299 5002 ⁽²⁾
	4 P	I - II	4220 4008 ⁽¹⁾					
	3 P	I - 0 - II	4230 3008 ⁽¹⁾					
	4 P	I - 0 - II	4230 4008 ⁽¹⁾					
	3 P	I - I+II - II	4240 3008 ⁽¹⁾					
	4 P	I - I+II - II	4240 4008 ⁽¹⁾					
	3 + 6 P	BY-PASS I - 0 - II	4250 3008					
	4 + 8 P	BY-PASS I - 0 - II	4250 4008					
100 A	3 P	I - II	4220 3010	Black/Grey 4259 1082	I - II 4259 2082	200 mm 4259 5082	DIN rail mounted 4259 9001	4299 5002 ⁽²⁾
	4 P	I - II	4220 4010					
	3 P	I - 0 - II	4230 3010					
	4 P	I - 0 - II	4230 4010					
	3 P	I - I+II - II	4240 3010					
	4 P	I - I+II - II	4240 4010					
	3 + 6 P	BY-PASS I - 0 - II	4250 3010					
	4 + 8 P	BY-PASS I - 0 - II	4250 4010					

(1) Available enclosed (see pages 496 "Enclosed changeover switches").
(2) IP65: Degree of protection according to standard IEC 60529.

➤ COMO C - Accessories

IP54 handle



Padlockable handle

Rating (A)	Handle color	Reference
25 ... 40	Black/Grey	4259 1042
25 ... 40	Red/Yellow	4259 1043
63 ... 100	Black/Grey	4259 1082
63 ... 100	Red/Yellow	4259 1083

Non-padlockable handle

Rating (A)	Switching type	Reference
25	I - II	4259 2022
25	I - 0 - II and BY-PASS	4259 3022
25	I - I+II - II	4259 4022
40	I - II	4259 2042
40	I - 0 - II and BY-PASS	4259 3042
40	I - I+II - II	4259 4042
63 ... 100	I - II	4259 2082
63 ... 100	I - 0 - II and BY-PASS	4259 3082
63 ... 100	I - I+II - II	4259 4082

Shaft and escutcheon for external handle



Use

Standard lengths: 200 mm.

Other lengths: Consult us.

Rating (A)	Length (mm)	Reference
25 ... 40	200 mm	4259 5042
63 ... 100	200 mm	4259 5082

➤ Characteristics according to IEC 60947-3

25 to 100 A

	25 A	40 A	63 A	80 A	100 A
Thermal current I_{th} (40°C)	25 A	40 A	63 A	80 A	100 A
Rated insulation voltage U_i (V)	660	660	660	660	660
Rated impulse withstand voltage U_{imp} (kV)	4	4	4	4	4

Rated operational currents I_o (A)		A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
Rated voltage	Load duty category					
400 VAC	AC-21 A	25/25	40/40	63/63	80/80	100/100
400 VAC	AC-22 A	25/25	40/40	63/63	80/80	100/100
400 VAC	AC-23 A	20/20	32/32	63/63	63/63	63/63

Operational power in AC-23 (kW)					
At 400 VAC without Pre-break AC ⁽¹⁾⁽²⁾	9/9	15/15	22/22	30/30	32/32

Reactive power (kvar)					
At 400 VAC ⁽²⁾	14	18	28	37	

Fuse protected short-circuit withstand (kA rms prospective)					
Prospective short-circuit current (kA rms) ⁽³⁾	6	6	8	8	8
Associated fuse rating (A) ⁽³⁾	25	40	63	80	100

Overload capacity					
Short-circuit making capacity (kA peak) ⁽³⁾	2	2,6	5,8	5,8	6,5

Connection					
Minimum Cu cable section (mm ²)	2,5	6	10	16	16
Maximum Cu cable section (mm ²)	6	16	50	50	50
Tightening torque min (Nm)	2	2	4	4	4

Mechanical characteristics					
Endurance (number of operating cycles) ⁽⁴⁾	100 000	100 000	100 000	100 000	100 000
Weight of 3 P switch (kg)	0.25	0.3	0.55	0.63	0.63
Weight of 4 P switch (kg)	0.31	0.4	0.7	0.8	0.8

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) The power value is given for information only, the current values vary from one manufacturer to another.

(3) For a rated operational voltage $U_o = 400$ VAC.

(4) Increased endurance: please consult us.

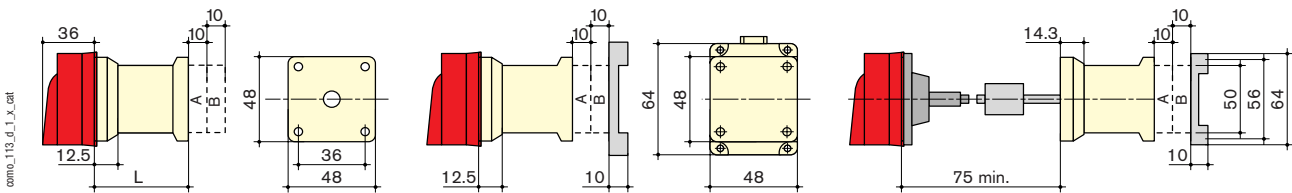
➤ Dimensions

COMO C 25 A

Direct operation front mounting

Direct operation rear mounting

Door interlocked external operation rear mounting



A. 1st auxiliary contact
B. 2nd auxiliary contact

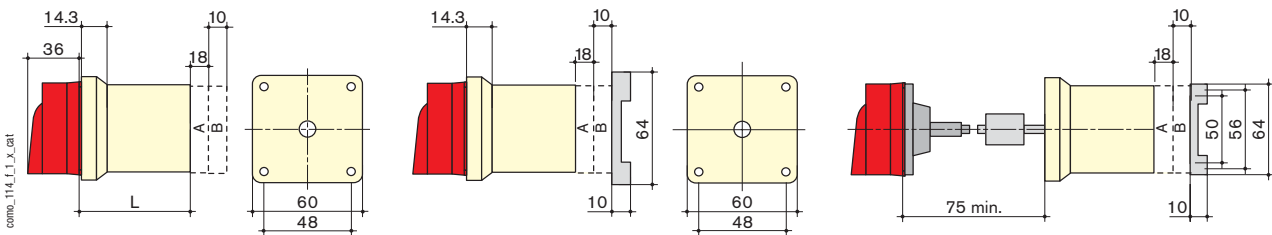
Switching type	L 3p.	L 4p.
I - II	50.5	60.5
I - 0 - II	50.5	60.5
I - I+II - II	50.5	60.5
BY-PASS I - 0 - II	70.5	80.5

COMO C 40 A

Direct operation front mounting

Direct operation rear mounting

Door interlocked external operation rear mounting



A. 1st auxiliary contact
B. 2nd auxiliary contact

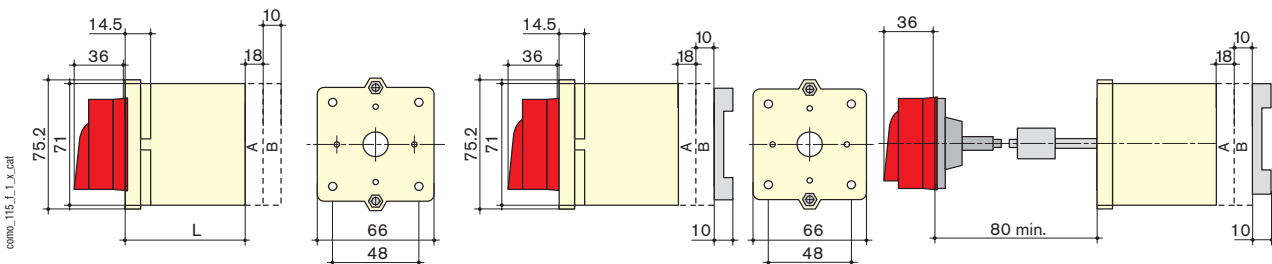
Switching type	L 3p.	L 4p.
I - II	60.3	72.3
I - 0 - II	60.3	72.3
I - I+II - II	60.3	72.3
BY-PASS I - 0 - II	84.3	96.3

COMO C 63 to 100 A

Direct operation front mounting

Direct operation rear mounting

Door interlocked external operation rear mounting



A. 1st auxiliary contact
B. 2nd auxiliary contact

Switching type	L 3p.	L 4p.
I - II	82	99.5
I - 0 - II	82	99.5
I - I+II - II	82	99.5
BY-PASS I - 0 - II	117	134.5

Changeover Switches

Manual Changeover Switches

SIRCO M



⇒ What you need to know

- The changeover switches SIRCO M can be equipped with 2 operating handles:
 - front **direct** handle
 - front **external** handle.
- Changeover SIRCO M is available in 3 and 4 poles, from 25 to 100 A, with pre-break or signalisation auxiliary contacts (accessories).

Changeover switches from 25 to 100 A

⇒ Function

SIRCO M Changeover Switches are 3 or 4 pole manually operated modular changeover switches. They provide changeover, source inversion or switching under load between two low voltage power circuits, as well as their safety isolation.

⇒ General characteristics

- Fully visualised breaking.
- DIN rail mounting, panel or modular panel with 45 mm front cut out.
- IP20 accessories.
- Overlapping Changeover I-I+II-II available, see page 18.

⇒ Conformity to standards

- IEC 60947-3
- EN 60947-3



➔ References

Rating (A)	No. of poles	Switch body	Direct handle	External front handle	Shaft extensions for external handle	Auxiliary contacts	Terminal shrouds	Bridging kit						
25 A	3 P	2230 3002	Blue 2239 5012	S00-type I - 0 - II Black IP65 1473 1113 ⁽¹⁾	150 mm 1407 0515	M1 type 1 contact NO + NC 2299 0001	1 P	3 P						
	4 P	2230 4002					2294 1005 ⁽²⁾	2299 3005						
40 A	3 P	2230 3004					S00-type I - 0 - II Black IP65 1473 1113 ⁽¹⁾	200 mm 1407 0520	M1 type 1 contact NO + NC 2299 0001	3 P	4 P			
	4 P	2230 4004								2294 3005 ⁽²⁾	2299 4005			
63 A	3 P	2230 3006					S00-type I - 0 - II Black IP65 1471 1113 ⁽¹⁾	320 mm 1407 0532	M1 type 1 contact 2 NC 2299 0011	1 P	3 P			
	4 P	2230 4006								2294 1009 ⁽²⁾	2299 3009			
80 A	3 P	2230 3008								S00-type I - 0 - II Black IP65 1471 1113 ⁽¹⁾	320 mm 1407 0532	M1 type 1 contact 2 NC 2299 0011	3 P	4 P
	4 P	2230 4008											2294 3009 ⁽²⁾	2299 4009
100 A	3 P	2230 3009								S00-type I - 0 - II Black IP65 1471 1113 ⁽¹⁾	320 mm 1407 0532	M1 type 1 contact 2 NC 2299 0011	3 P	4 P
	4 P	2230 4009											2294 3009 ⁽²⁾	2299 4009

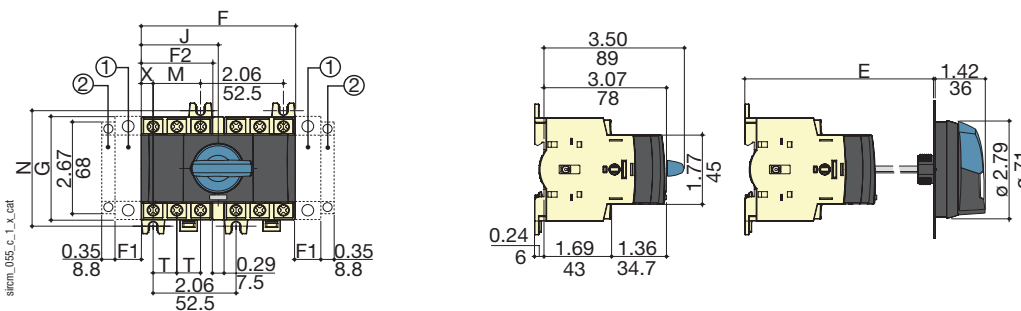
(1) Defeatable handle.
(2) Set of top and bottom.

➔ Dimensions

SIRCO M 25 to 100 A

Direct front operation 3/4-pole changeover switches

External front operation for 3 and 4-pole changeover switches

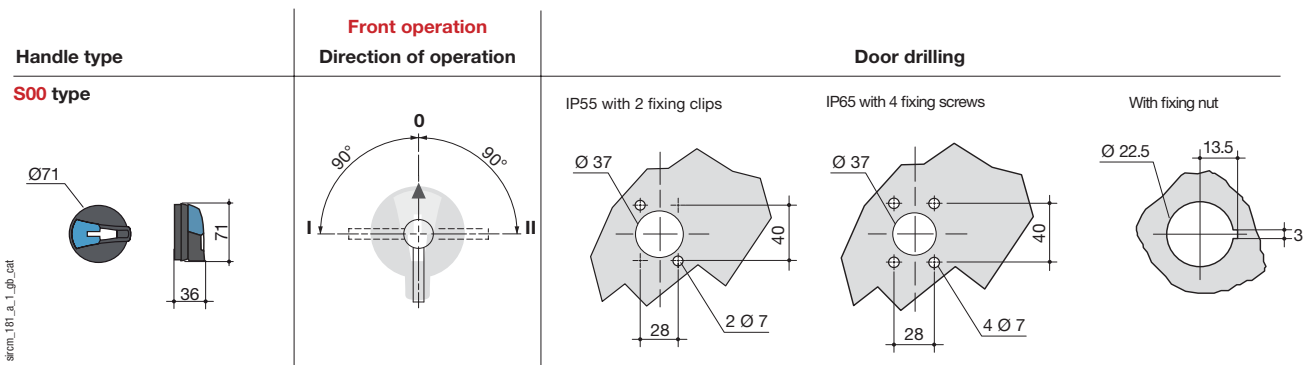


1. Location for: 1 switched fourth pole module (1 on each side max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact (See accessories, page 21).
2. Position for 1 auxiliary contact only.

Note: max 4 additional blocks.

Rating (A)	Overall dimensions		Switch body					Switch mounting		Connection	
	E min	E max	F	F1	F2	G	J	M	N	T	X
25	105	372	97.5	15	45	68	48.75	30	75	15	7.5
40	105	372	97.5	15	45	68	48.75	30	75	15	7.5
63...100	105	372	105	17.5	52.5	76	52.5	35	85	17.5	8.75

Dimensions for external handles



➔ Accessories

See "SIRCO M switches", page 21 to 25.

➔ Characteristics according to IEC 60947-3

See "SIRCO M switches", page 26.

SIRCO VM1



Visible breaking changeover switches from 63 to 125 A

➤ Function

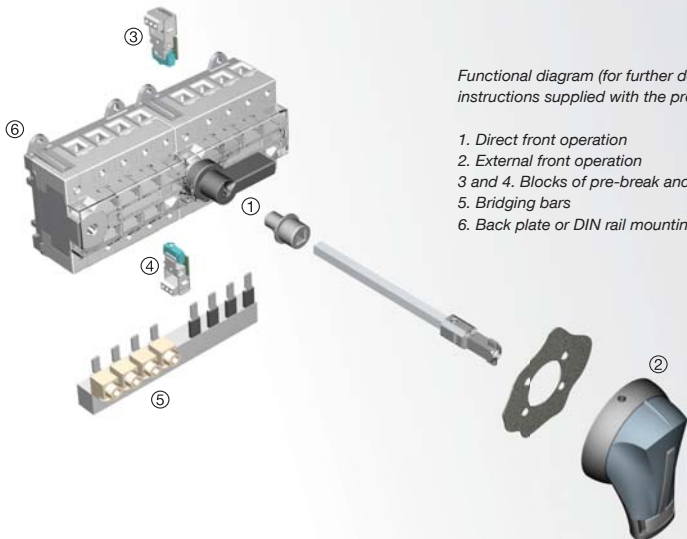
SIRCO VM1 changeover switches are manually operated three or four pole changeover switches. They provide changeover, source inversion or switching under load between two low voltage power circuits, as well as their safety isolation.

➤ General characteristics

- Safety isolation by fully visible double breaking.
- DIN rail mounting, panel or modular panel with 45 mm front cut out.
- IP20 devices and accessories.

➤ Conformity to standards

- IEC 60947-3
- IS 14947-3
- EN 60947-3
- VDE 0660-107 (1992)
- NBN EN 60947-3
- BS EN 60947-3



Functional diagram (for further details see the installation instructions supplied with the product).

1. Direct front operation
2. External front operation
- 3 and 4. Blocks of pre-break and signalling auxiliary contacts
5. Bridging bars
6. Back plate or DIN rail mounting

comint_021_a_1_x_cat

References



VM1 changeover switches I-0-II

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	IP20 bridging bars ⁽²⁾	Auxiliary contacts
63 A	3 P	4430 3006 ⁽¹⁾	Black 4439 5012	S1 type Black IP65 1413 2113	200 mm 1402 0820	3 P 4499 3006	1 auxiliar contact NO/NC 4439 0001
	4 P	4430 4006 ⁽¹⁾					
80 A	3 P	4430 3008 ⁽¹⁾					
	4 P	4430 4008 ⁽¹⁾					
100 A	3 P	4430 3010 ⁽¹⁾			320 mm 1402 0832	4 P 4499 4006	
	4 P	4430 4010 ⁽¹⁾					
125 A	3 P	4430 3012					
	4 P	4430 4012					

(1) Available enclosed (see page 496 "Enclosed changeover switches").

(2) IP: Degree of protection according to standard IEC 60529.

VM1 changeover switches I-I+II-II

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	IP20 bridging bars ⁽¹⁾
63 A	3 P	4440 3006	Black 4449 5012	S1 type Black IP65 1413 2114	200 mm 1403 0820	3 P 4499 3006
	4 P	4440 4006				
80 A	3 P	4440 3008				
	4 P	4440 4008				
100 A	3 P	4440 3010			320 mm 1403 0832	4 P 4499 4006
	4 P	4440 4010				
125 A	3 P	4440 3012				
	4 P	4440 4012				

(1) IP: Degree of protection according to standard IEC 60529.

Accessories

Direct handle



Rating (A)	Switching type	Reference
63 ... 125	I - 0 - II	4439 5012
63 ... 125	I - I+II - II	4449 5012

Door interlocked external handle



Use

Padlockable handle including escutcheon.

Rating (A)	Switching type	padlockable	External IP ⁽¹⁾	Reference
63 ... 125	I - 0 - II	1 Position	IP55	1411 2113
63 ... 125	I - 0 - II	1 Position	IP65	1413 2113
63 ... 125	I - 0 - II	3 Positions	IP65	1413 2813
63 ... 125	I - I+II - II	1 Position	IP65	1413 2114
63 ... 125	I - I+II - II	3 Positions	IP65	1413 2814

(1) IP: Degree of protection according to standard IEC 60529.

Alternative S-type handle cover colours

acce_199_a_1_cat



Use

For single lever type S1 handles.

Other colours: Consult us.

Color	To be ordered by multiple	Reference
Light grey	50	1401 0001
Dark grey	50	1401 0011

S type handle adapter

acce_197_a_1_cat



Use

Enables S type handles to be fitted in place of existing older style Socomec handles. Adapter can also be utilised as a spacer to increase the distance between the panel door and the handle lever.

Dimensions

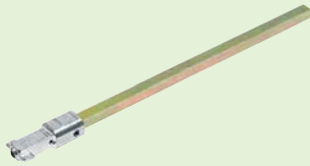
Adds 12 mm to the depth.

Color	To be ordered in multiples of	External IP ⁽¹⁾	Reference
Black	10	IP65	1493 0000

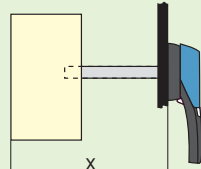
(1) IP: Degree of protection according to standard IEC 60529.

Shaft for external handle

acce_146_b_1_cat



acce_202_a_1_x_cat



Use

Standard lengths:

- 200 mm,
- 320 mm.

Other lengths: Consult us.

In position I - 0 - II

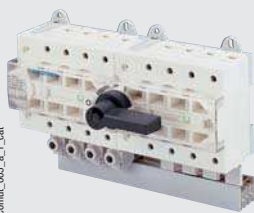
Rating (A)	Dimension X (mm)	Shaft length (mm)	Reference
63 ... 125	128 ... 290	200 mm	1402 0820
63 ... 125	128 ... 410	320 mm	1402 0832

In position I - I+II - II

Rating (A)	Dimension X (mm)	Shaft length (mm)	Reference
63 ... 125	128 ... 290	200 mm	1403 0820
63 ... 125	128 ... 410	320 mm	1403 0832

IP20 bridging bar

comul_005_a_1_cat



Use

Connects to the standard switch terminals in order to provide common bridging point.

Can be fitted to either top or bottom side of the switch.

Rating (A)	No. of poles	Reference
63 ... 125	3 P	4499 3006
63 ... 125	4 P	4499 4006

NO/NC changeover auxiliary contacts

Use

Pre-break and signalling of positions I and II: 1 NO/NC auxiliary contact for each position.

Characteristics

- Snaps on and is locked by a screw.
- Connector block with a capacity max. of 2 x 1.5 mm² per terminal.

Rating (A)	Switching type	Contact(s)	Reference
63 ... 125	I - 0 - II	1	4439 0001 ⁽¹⁾

(1) Not available for the make before break changeover switch (I-I+II-II).

Characteristics according to IEC 60947-3

63 to 125 A

Thermal current I_{th} (40°C)	63 A	80 A	100 A	125 A
Rated insulation voltage U_i (V)	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8

Rated operational currents I_o (A)

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
400 VAC	AC-21 A / AC-21 B	63/63	80/80	100/100	125/125
400 VAC	AC-22 A / AC-22 B	63/63	80/80	100/100	125/125
400 VAC	AC-23 A / AC-23 B	63/63	63/63	63/63	63/63
690 VAC ⁽²⁾	AC-20 A / AC-20 B	63/63	80/80	100/100	125/125
690 VAC ⁽²⁾	AC-21 A / AC-21 B	63/63	80/80	80/80	80/80
690 VAC ⁽²⁾	AC-22 A / AC-22 B	40/40	40/40	40/40	40/40
690 VAC ⁽²⁾	AC-23 A / AC-23 B	25/25	25/25	25/25	25/25
220 VDC ⁽³⁾	DC-20 A / DC-20 B	63/63	80/80	100/100	125/125
220 VDC ⁽³⁾	DC-21 A / DC-21 B	63/63	80/80	100/100	125/125
220 VDC ⁽³⁾	DC-22 A / DC-22 B	63/63	80/80	100/100	100/100
220 VDC ⁽³⁾	DC-23 A / DC-23 B	63/63	63/63	63/63	63/63

Operational power(kW)

At 400 VAC without pre-break in AC-23 ⁽⁴⁾	30/30	30/30	30/30	30/30
At 690 VAC without pre-break in AC-23 ⁽⁴⁾	22/22	22/22	22/22	22/22
At 400 VAC with pre-break AC ⁽⁴⁾	30/30	40/40	51/51	63/63
At 400 VAC with pre-break AC ⁽⁴⁾	33/33	33/33	33/33	33/33

Reactive power (kvar)

At 400 VAC ⁽⁴⁾	28	37	45	55
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Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit current (kA rms) ⁽⁵⁾	100	100	100	50
Associated fuse rating (A) ⁽⁵⁾	63	80	100	125

Overload capacity

Rated short-time withstand current 0.3 s. I_{cw} (kA eff.)	4.5	4.5	4.5	4.5
Short-circuit making capacity (kA peak) ⁽⁵⁾	12	12	12	12

Connection

Minimum Cu cable section (mm ²)	4	4	4	4
Maximum Cu cable section (mm ²)	50	50	50	50
Tightening torque min (Nm)	6	6	6	6

Mechanical characteristics

Durability (number of operating cycles) ⁽⁶⁾	10 000	10 000	10 000	10 000
Weight of 3 P switch (kg)	1.2	1.2	1.4	1.4
Weight of 4 P switch (kg)	1.4	1.4	1.6	1.6

(1) Category with index A = frequent operations - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barriers.

(3) 4-poles device with 2 poles in series by polarity.

(4) The power value is given for information only, the current values vary from one manufacturer to another.

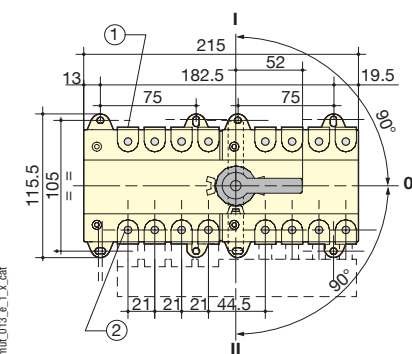
(5) For a rated operational voltage $U_o = 400$ VAC.

(6) Increased durabilities: please consult us.

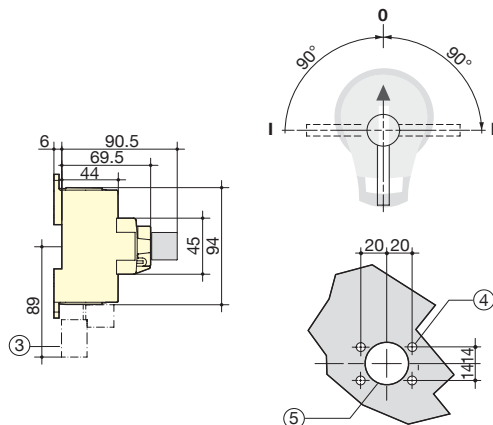
Dimensions

63 to 125 A

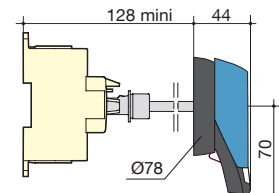
Direct front operation



External front operation



- Max connection:
 - Rigid: 50 mm²
 - Flexible: 35 mm²
- 6-sided 5 - Pozidrive no. 1 slot 4.5 mm.
- Bridging bar
- Mounting by 2 or 4 screws Ø7 mm.



comul_013_e_1_x_saf

SIRCOVER **BY-PASS**



Changeover switches with fully visualised breaking from 125 to 3200 A

⇒ Function

SIRCOVER products are manually operated multipolar changeover switches. They provide changeover, source inversion or switching under load between two low voltage power circuits, as well as their safety isolation.

SIRCOVER BY-PASS are manually operated changeover switches. They are a combination of three interlocked switches enabling the use with 3 + 6 pole or 4 + 8 pole. They insulate by providing simultaneous safety isolation top and bottom and by passing loads of low voltage circuits mainly during maintenance operations.

⇒ General characteristics

- 3 stable positions, (I, 0, II) or overlapping contacts (I, I+II, II), and on load changeover switching (AC-22 and AC-23).
- Fully visualized breaking.
- IP20 devices and accessories.

⇒ Available on request

- Devices 6 or 8 pole
- Devices with oversized neutral ex.: 3 x 250 A + N 400 A.
- Devices with advanced neutral.

⇒ Conformity to standards

- IEC 60947-3
- IS 14947-3
- EN 60947-3
- VDE 0660-107 (1992)
- NBN EN 60947-3
- BS EN 60947-3

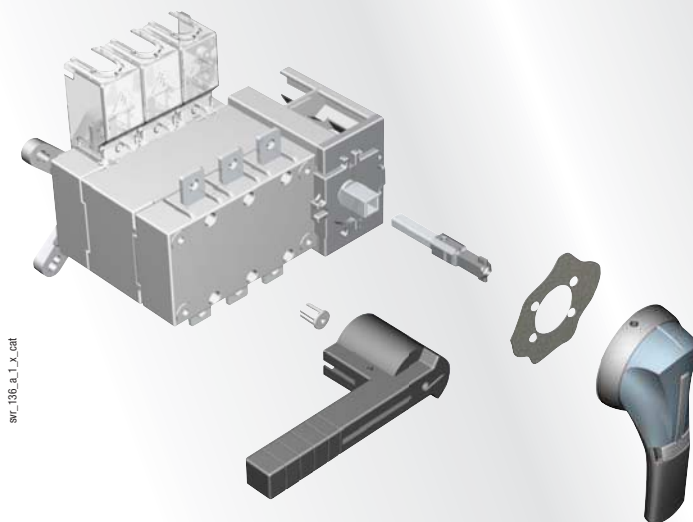
⇒ Approvals and certifications⁽¹⁾

- Bureau Véritas
- BBJ Poland (Attestation of verification)

⁽¹⁾ Product reference on request.

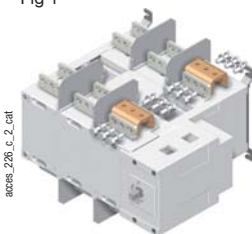
What you need to know

- **SIRCOVER** with **3 stable positions** (I, O, II) are 3 or 4 pole devices from 125 A to 3200 A. They are available enclosed in a steel or polyester enclosure from 125 to 1600 A.
- **SIRCOVER** with **overlapping contacts** (I-I+II-II) are 3 or 4 pole devices available from 125 to 1800A. They are available enclosed in a steel enclosure from 125 to 1600 A.
- **SIRCOVER BY-PASS** with **3 stable positions** (I, O, II) are a combination of three interlocked switches enabling the use with 3+6 poles or 4+8 poles from 125 to 1600 A. They are available in steel enclosure from 125 to 1600 A and with overlapping contacts (I, I+II, II).
- **SIRCOVER** and **SIRCOVER BY-PASS** can be used with a **direct or external handle**.



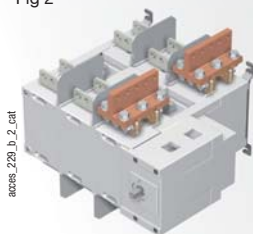
- A **connection kit for copper bars** allows the link between the 2 connection terminals of one pole (fig 1 and 2) and the bridging of the upstream and downstream link for ratings 2000, 2500 and 3200A (fig 3).

Fig 1



Top or bottom **flat connection**

Fig 2



Edgewise connection
Top or bottom

Fig 3



Top or bottom **bridging connection**



➔ SIRCOVER and SIRCOVER BY-PASS - References



sw_051_a_1_cat

SIRCOVER I-O-II

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bar*	Auxiliary contacts	Terminal shrouds	Terminals protection screen
125 A	3 P	4100 3013 ⁽¹⁾	Black 4199 5012 ⁽²⁾	Type S2 Black IP55 1421 2113 Black IP65 1423 2113 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0019	1 st /2 nd contact NO/NC 4109 0021 ⁽⁴⁾	3 P 2694 3014 ⁽⁵⁾⁽⁶⁾	3 P 1509 3012 ⁽⁷⁾
	4 P	4100 4013 ⁽¹⁾							
160 A	3 P	4100 3016 ⁽¹⁾						3 P 2694 3021 ⁽⁵⁾⁽⁶⁾	3 P 1509 3025 ⁽⁷⁾
	4 P	4100 4016 ⁽¹⁾							
200 A	3 P	4100 3019						4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾
	4 P	4100 4019							
250 A	3 P	4100 3025 ⁽¹⁾						4 P 2694 4063 ⁽⁷⁾	4 P 1509 4063 ⁽⁷⁾
	4 P	4100 4025 ⁽¹⁾							
400 A	3 P	4100 3039 ⁽¹⁾				4 P 2694 4051 ⁽⁵⁾⁽⁶⁾		4 P 1509 4063 ⁽⁷⁾	
	4 P	4100 4039 ⁽¹⁾							3 P 2694 3051 ⁽⁵⁾⁽⁶⁾
500 A	3 P	4100 3050 ⁽¹⁾				4 P 2694 4051 ⁽⁵⁾⁽⁶⁾		4 P 1509 4063 ⁽⁷⁾	
	4 P	4100 4050 ⁽¹⁾							3 P 2694 3051 ⁽⁵⁾⁽⁶⁾
630 A	3 P	4100 3063 ⁽¹⁾				4 P 2694 4051 ⁽⁵⁾⁽⁶⁾		4 P 1509 4063 ⁽⁷⁾	
	4 P	4100 4063 ⁽¹⁾							3 P 2694 3051 ⁽⁵⁾⁽⁶⁾
800 A	3 P	4100 3080 ⁽¹⁾				4 P 2694 4051 ⁽⁵⁾⁽⁶⁾		4 P 1509 4063 ⁽⁷⁾	
	4 P	4100 4080 ⁽¹⁾							3 P 2694 3051 ⁽⁵⁾⁽⁶⁾
1 250 A	3 P	4100 3120 ⁽¹⁾	4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾					
	4 P	4100 4120 ⁽¹⁾			3 P 2694 3051 ⁽⁵⁾⁽⁶⁾	3 P 1509 3063 ⁽⁷⁾			
1 600 A	3 P	4100 3160 ⁽¹⁾	4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾					
	4 P	4100 4160 ⁽¹⁾			3 P 2694 3051 ⁽⁵⁾⁽⁶⁾	3 P 1509 3063 ⁽⁷⁾			
1 800 A	3 P	4100 3180	4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾					
	4 P	4100 4180			3 P 2694 3051 ⁽⁵⁾⁽⁶⁾	3 P 1509 3063 ⁽⁷⁾			
2 000 A	3 P	4100 3200	4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾					
	4 P	4100 4200			3 P 2694 3051 ⁽⁵⁾⁽⁶⁾	3 P 1509 3063 ⁽⁷⁾			
2 500 A	3 P	4100 3250	4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾					
	4 P	4100 4250			3 P 2694 3051 ⁽⁵⁾⁽⁶⁾	3 P 1509 3063 ⁽⁷⁾			
3 200 A	3 P	4100 3320	4 P 2694 4051 ⁽⁵⁾⁽⁶⁾	4 P 1509 4063 ⁽⁷⁾					
	4 P	4100 4320			3 P 2694 3051 ⁽⁵⁾⁽⁶⁾	3 P 1509 3063 ⁽⁷⁾			

* 1 piece required per pole.

(1) Available enclosed (see pages 498 and 500 "Enclosed changeover switches").

(2) Standard.

(3) See page 281 "Copper bars connection kits".

(4) 2 pieces: one for position I and one for position II.

(5) To shroud front switch top and bottom 2 references required.

(6) To fully shroud front, rear, top and bottom 4 references required.

(7) 2 pieces: one for top side and another for bottom side.

SIRCOVER I - I+II - II



SIRCOVER I - I+II - II

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bar*	Auxiliary contacts	Terminal shrouds	Terminal screens																																			
125 A	3 P	4190 3013 ⁽¹⁾	Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0019	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3014 ⁽⁴⁾⁽⁵⁾	3 P 1509 3012 ⁽⁶⁾																																			
	4 P	4190 4013 ⁽¹⁾								4 P 2694 4014 ⁽⁴⁾⁽⁵⁾	4 P 1509 4012 ⁽⁶⁾																																	
160 A	3 P	4190 3016 ⁽¹⁾						Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0019	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3014 ⁽⁴⁾⁽⁵⁾	3 P 1509 3012 ⁽⁶⁾																														
	4 P	4190 4016 ⁽¹⁾													4 P 2694 4014 ⁽⁴⁾⁽⁵⁾	4 P 1509 4012 ⁽⁶⁾																												
200 A	3 P	4190 3019											Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0019	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3014 ⁽⁴⁾⁽⁵⁾	3 P 1509 3012 ⁽⁶⁾																									
	4 P	4190 4019																		4 P 2694 4014 ⁽⁴⁾⁽⁵⁾	4 P 1509 4012 ⁽⁶⁾																							
250 A	3 P	4190 3025 ⁽¹⁾																Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0025	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3021 ⁽⁴⁾⁽⁵⁾	3 P 1509 3025 ⁽⁶⁾																				
	4 P	4190 4025 ⁽¹⁾																							4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	4 P 1509 4025 ⁽⁶⁾																		
400 A	3 P	4190 3039 ⁽¹⁾																					Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0039	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3021 ⁽⁴⁾⁽⁵⁾	3 P 1509 3025 ⁽⁶⁾															
	4 P	4190 4039 ⁽¹⁾																												4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	4 P 1509 4025 ⁽⁶⁾													
500 A	3 P	4190 3050 ⁽¹⁾																										Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0050	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3063 ⁽⁶⁾										
	4 P	4190 4050 ⁽¹⁾																																	4 P 2694 4051 ⁽⁴⁾⁽⁵⁾	4 P 1509 4063 ⁽⁶⁾								
630 A	3 P	4190 3063 ⁽¹⁾																															Black 4199 5012 ⁽²⁾	S2 type Black IP65 1423 2114 ⁽²⁾	200 mm 1400 1020 320 mm 1400 1032 ⁽²⁾	4109 0063	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3063 ⁽⁶⁾					
	4 P	4190 4063 ⁽¹⁾																																						4 P 2694 4051 ⁽⁴⁾⁽⁵⁾	4 P 1509 4063 ⁽⁶⁾			
800 A	3 P	4190 3080 ⁽¹⁾																																				Black 4199 5012 ⁽²⁾	S4 type Black IP65 1443 3114 ⁽²⁾	200 mm 1401 1520 320 mm 1401 1532 ⁽²⁾	4109 0080	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3080 ⁽⁶⁾
	4 P	4190 4080 ⁽¹⁾																																										
1 250 A	3 P	4190 3120 ⁽¹⁾	Black 4199 5012 ⁽²⁾	S4 type Black IP65 1443 3114 ⁽²⁾	200 mm 1401 1520 320 mm 1401 1532 ⁽²⁾	4109 0120	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾																																				3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3080 ⁽⁶⁾
	4 P	4190 4120 ⁽¹⁾																																										
1 600 A	3 P	4190 3160 ⁽¹⁾						Black 4199 5012 ⁽²⁾	S4 type Black IP65 1443 3114 ⁽²⁾	200 mm 1401 1520 320 mm 1401 1532 ⁽²⁾	4109 0160	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾																															3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3160 ⁽⁶⁾
	4 P	4190 4160 ⁽¹⁾																																										
1 800 A	3 P	4190 3180											Black 4199 5012 ⁽²⁾	S4 type Black IP65 1443 3114 ⁽²⁾	200 mm 1401 1520 320 mm 1401 1532 ⁽²⁾	4109 0160	1 st /2 nd contact NO/NC 4109 0021 ⁽³⁾																										3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3160 ⁽⁶⁾
	4 P	4190 4180																																										

* 1 piece required per pole.

(1) Available enclosed (see pages 498 and 500 "Enclosed changeover switches").

(2) Standard.

(3) 2 pieces: one for position I and one for position II.

(4) To fully shroud front, rear, top and bottom 4 references required.

(5) To shroud front switch top and bottom 2 references required.

(6) 2 pieces: one for top side and another for bottom side.



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SIRCOVER BY-PASS

Rating (A)	No. of poles	Switch body I-0-II	Direct handle	External handle	Shaft for external handle	Bridging bar	Auxiliary contacts	Terminal shrouds	Terminal screens																
125 A	3 + 6 P	4100 7013 ⁽¹⁾	Black 4199 5012 ⁽²⁾	S2 type Black IP55 1421 2113 ⁽²⁾	200 mm 1400 1020	4109 0019	1st/2nd contact NO/NC 4109 0021 ⁽³⁾	3 P 2694 3014 ⁽⁴⁾⁽⁵⁾	3 P 1509 3012 ⁽⁶⁾																
	4 + 8 P	4100 9013 ⁽¹⁾																							
160 A	3 + 6 P	4100 7016 ⁽¹⁾								Black IP65 1423 2113	320 mm 1400 1032 ⁽²⁾	4109 0019	4 P 2694 4014 ⁽⁴⁾⁽⁵⁾	4 P 1509 4012 ⁽⁶⁾											
	4 + 8 P	4100 9016 ⁽¹⁾																							
200 A	3 + 6 P	4100 7019								Black 2799 7052 ⁽²⁾	S3 type Black IP65 1433 3113 ⁽²⁾	200 mm 1401 1520	4109 0019	4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	4 P 1509 4025 ⁽⁶⁾										
	4 + 8 P	4100 9019																							
250 A	3 + 6 P	4100 7025 ⁽¹⁾														Black IP65 1433 3113 ⁽²⁾	320 mm 1401 1532 ⁽²⁾	4109 0025	4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	3 P 2694 3021 ⁽⁴⁾⁽⁵⁾	3 P 1509 3025 ⁽⁶⁾				
	4 + 8 P	4100 9025 ⁽¹⁾																							
400 A	3 + 6 P	4100 7039 ⁽¹⁾														Black 2799 7052 ⁽²⁾	S3 type Black IP65 1433 3113 ⁽²⁾	200 mm 1401 1520	4109 0039	4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	4 P 1509 4025 ⁽⁶⁾				
	4 + 8 P	4100 9039 ⁽¹⁾																							
500 A	3 + 6 P	4100 7050 ⁽¹⁾	Black IP65 1433 3113 ⁽²⁾	320 mm 1401 1532 ⁽²⁾	4109 0050	4 P 2694 4051 ⁽⁴⁾⁽⁵⁾	3 P 2694 3051 ⁽⁴⁾⁽⁵⁾	3 P 1509 3063 ⁽⁶⁾																	
	4 + 8 P	4100 9050 ⁽¹⁾																							
630 A	3 + 6 P	4100 7063 ⁽¹⁾	Black 2799 7052 ⁽²⁾	S3 type Black IP65 1433 3113 ⁽²⁾	200 mm 1401 1520	4109 0063	4 P 2694 4051 ⁽⁴⁾⁽⁵⁾	4 P 1509 4063 ⁽⁶⁾																	
	4 + 8 P	4100 9063 ⁽¹⁾																							
800 A	3 + 6 P	4100 7080 ⁽¹⁾							Black 2799 7012 ⁽²⁾	Black IP65 4199 7146 ⁽²⁾	200 mm 2799 3015	4109 0080	4 P 1509 4080 ⁽⁶⁾	3 P 1509 3080 ⁽⁶⁾											
	4 + 8 P	4100 9080 ⁽¹⁾																							
1 250 A	3 + 6 P	4100 7120 ⁽¹⁾													Black IP65 4199 7146 ⁽²⁾							450 mm 2799 3019 ⁽²⁾	4109 0120	4 P 1509 4080 ⁽⁶⁾	4 P 1509 4080 ⁽⁶⁾
	4 + 8 P	4100 9120 ⁽¹⁾																							
1 600 A	3 + 6 P	4100 7160													Black IP65 4199 7146 ⁽²⁾	450 mm 2799 3019 ⁽²⁾	4109 0160	4 P 1509 4160 ⁽⁶⁾	4 P 1509 4160 ⁽⁶⁾						
	4 + 8 P	4100 9160																							

* For By-Pass 2 pieces are required per pole.

(1) Available enclosed (see pages 498 and 500 "Enclosed changeover switches").

(2) Standard.

(3) 2 pieces: one for position I and one for position II.

(4) To shroud front switch top and bottom 3 references required.

(5) To fully shroud front, rear, top and bottom 6 references required.

(6) 2 pieces: one for top side and another for bottom side.

Accessories

Direct handle



SIRCOVER

Rating (A)	Handle color	Handle type	Reference
125 ... 630	Black	Single lever	4199 5012
800 ... 1800	Black	Single lever	2799 7052
2000 ... 3200	Black	Double lever	2799 7012

SIRCOVER BY-PASS

Rating (A)	Handle color	Handle type	Reference
125 ... 200	Black	Single lever	4199 5012
250 ... 630	Black	Single lever	2799 7052
800 ... 1600	Black	Double lever	2799 7012

External operation handle



Use

The door interlocked external operation handle includes one padlockable handle, one escutcheon and must be utilised with a shaft extension.

SIRCOVER

Rating (A)	Switching type	External IP ⁽¹⁾	Handle	Reference
125 ... 630	I - 0 - II	IP55	S2 type	1421 2113
125 ... 630	I - 0 - II	IP65	S2 type	1423 2113
125 ... 630	I - I+II - II	IP65	S2 type	1423 2114
800 ... 1800	I - 0 - II	IP65	S4 type	1443 3113 ⁽²⁾
800 ... 1800	I - I+II - II	IP65	S4 type	1443 3114 ⁽²⁾
2000 ... 3200	I - 0 - II	IP65		2799 7146 ⁽²⁾

(1) IP: Degree of protection according to standard IEC 60529.

(2) Double lever handle.

SIRCOVER BY-PASS

Rating (A)	Switching type	External IP ⁽¹⁾	Handle	Reference
125 ... 200	I - 0 - II	IP55	S2 type	1421 2113
125 ... 200	I - 0 - II	IP65	S2 type	1423 2113
250 ... 630	I - 0 - II	IP65	S3 type	1433 3113
800 ... 1600	I - 0 - II	IP65		4199 7146

(1) IP: Degree of protection according to standard IEC 60529.

Alternative S-type handle cover colours



Use

For single lever handles S1, S2, S3 type and for double lever handle S4 type. Other colours: Consult us.

Color	To be ordered in multiples of	Handle	Reference
Light grey	50	S2, S3 type	1401 0001
Dark grey	50	S2, S3 type	1401 0011
Light grey	50	S4 type	1401 0031
Dark grey	50	S4 type	1401 0041

S type handle adapter



Use

Enables S type handles to be fitted in place of existing older style Socomec handles. Adapter can also be utilised as a spacer to increase the distance between the panel door and the handle lever.

Dimensions

Adds 12 mm to the depth.

Color	To be ordered in multiples of	External IP ⁽¹⁾	Reference
Black	10	IP65	1493 0000

(1) IP: Degree of protection according to standard IEC 60529.

Shaft guide for external operation



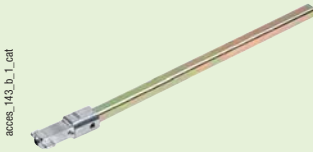
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Use

To guide the shaft extension into the external handle.
This accessory enables handle to engage extension shaft with a misalignment of up to 15 mm.
Required for a shaft length over 320 mm.

Description	Reference
Shaft guide	1429 0000

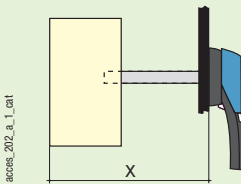
Shaft for external handle



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aces_144_b_1_cat



aces_202_a_1_cat

Use

Standard lengths:
- 200 mm,
- 320 mm,
- 450 mm.
Other lengths: Consult us.

SIRCOVER

Rating (A)	Shaft length (mm)	Dimension X (mm)	Reference
125 ... 400	200 mm	210 ... 310	1400 1020
125 ... 400	320 mm	210 ... 430	1400 1032
500 ... 630	200 mm	280 ... 390	1400 1020
500 ... 630	320 mm	280 ... 510	1400 1032
800 ... 1800	200 mm	425 ... 577	1401 1520
800 ... 1800	320 mm	425 ... 697	1401 1532
2000 ... 3200	320 mm	653 ... 923	2799 3018⁽¹⁾

(1) Extension shaft.

SIRCOVER BY-PASS

Rating (A)	Shaft length (mm)	Dimension X (mm)	Reference
125 ... 200	200 mm	320 ... 450	1400 1020
125 ... 200	320 mm	320 ... 570	1400 1032
250 ... 400	200 mm	298 ... 420	1401 1520
250 ... 400	320 mm	298 ... 540	1401 1532
500 ... 630	200 mm	417 ... 539	1401 1520
500 ... 630	320 mm	417 ... 659	1401 1532
800 ... 1600	200 mm	550 ... 680	2799 3015⁽¹⁾
800 ... 1600	450 mm	550 ... 800	2799 3019⁽¹⁾

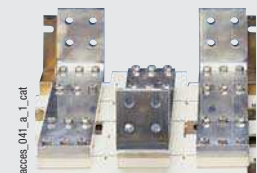
(1) Extension shaft.

Bridging bars

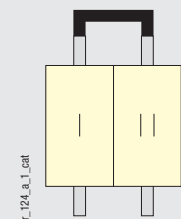
SIRCOVER



aces_205_a_2_cat



aces_041_a_1_cat

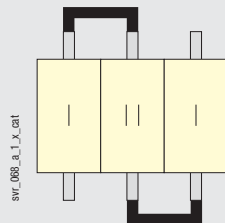


svr_124_a_1_cat

SIRCOVER BY-PASS



aces_208_a_2_cat



svr_008_a_1_x_cat

Use

Creation of a common link, on the top or bottom side of the switch, in order to feed load with either power supply I or/and II. For SIRCOVER BY-PASS, two sets of bridging bars are needed as the switch is composed of three basic switch frames.

Position I: 6 or 8 poles
Position II: 3 or 4 poles

Rating (A)	Section (mm)	Reference
125 ... 200	20 x 2.5	4109 0019
250	25 x 2.5	4109 0025
400	32 x 5	4109 0039
500	32 x 5	4109 0050
630	50 x 5	4109 0063
800	50 x 6	4109 0080
1250	60 x 8	4109 0120
1600 ... 1800	90 x 10	4109 0160

Copper bars connection kits for 2000 to 3200 A SIRCOVER

Fig.1

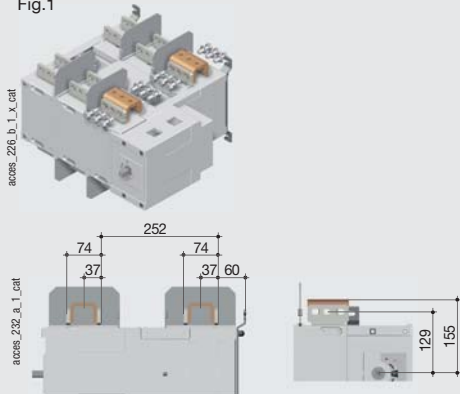


Fig.2

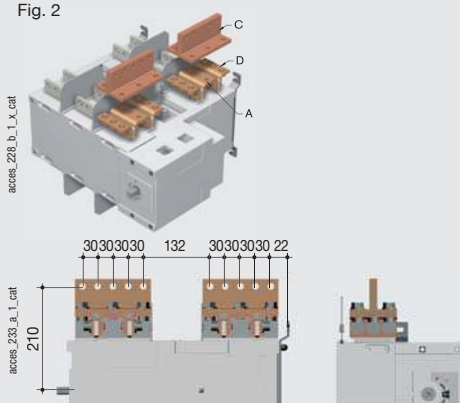
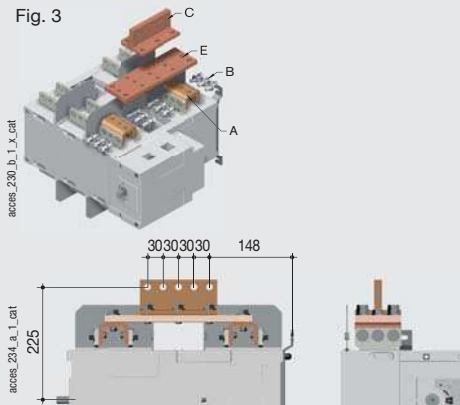


Fig.3



Use

Enables:

- To allow connection between the two power terminals from a same pole for 2000 to 3200A ratings (Fig. 1 and Fig 2).
- Top or bottom bridging connection (Fig. 3).

For 3200 A rating, the connection pieces (part A) are delivered bridged from factory. Bolt sets must be ordered separately.

Technical notice for these specific accessories is downloadable from www.socomec.com

Top or bottom flat connection - Fig. 1

Rating (A)	Piece	Quantity to order per pole ⁽¹⁾	Reference
2 000 ... 2 500	Connection - part A	2	2619 1200
2 000 ... 2 500	Bolt set - part B	2	2699 1200
3 200	Connection - part A		included
3 200	Bolt set - part B	2	2699 1200

(1) Example for 3 pole device equipped upstream only: order 3 times the indicated quantities.

Top or bottom edgewise connection - Fig. 2

Rating (A)	Piece	Quantity to order per pole ⁽¹⁾	Reference
2 000 ... 2 500	Connection - part A	2	2619 1200
2 000 ... 2 500	T piece - part C	2	2629 1200 ⁽²⁾
2 000 ... 2 500	Right angle - part D	2	2639 1200 ⁽²⁾
3 200	Connection - part A		included
3 200	T piece - part C	2	2629 1200 ⁽²⁾
3 200	Right angle - part D	2	2639 1200 ⁽²⁾

(1) Example for 3 pole device equipped upstream only: order 3 times the indicated quantities.
 (2) Bolt set is provided with the accessories.

Top or bottom bridging connection - Fig. 3

Rating (A)	Piece	Quantity to order per pole ⁽¹⁾	Reference
2 000 ... 2 500	Connection - part A	2	2619 1200
2 000 ... 2 500	Bolt set - part B	2	2699 1200
2 000 ... 2 500	Bar - piece E	1	4109 0250 ⁽²⁾
2 000 ... 2 500	T piece - part C	1	2629 1200 ⁽²⁾
3 200	Connection - part A		included
3 200	Bolt set - part B	2	2699 1200
3 200	Bar - piece E	1	4109 0320 ⁽²⁾
3 200	T piece - part C	1	2629 1200 ⁽²⁾

(1) Example for 3 pole device equipped upstream only: order 3 times the indicated quantities.
 (2) Bolt set is provided with the accessories.

Auxiliary contacts



Use

Pre breaking and positions I and II signalling: 1 or 2 NO/NC auxiliary contacts in each position.
 Low level auxiliary contacts: Consult us.

Connection to the control circuit
 By 6.35 mm fast-on terminal.

Electrical characteristics
 30 000 operations.

NO/NC changeover contact

Rating (A)	Contact(s)	Reference
125 ... 1800	1 st /2 nd	4109 0021
2000 ... 3200	1 st	included
2000 ... 3200	2 nd	4409 0022

Characteristics

Rating (A)	Nominal current (A)	Operating current I ₀ (A)			
		A - 250 -13VAC	400 VAC AC-13	24 VDC DC-13	48 VDC DC-13
125 ... 3200	16	12	8	14	6

Terminal shrouds

accres_206_a_2_cat



Use

Protection against direct contact with terminals or connecting parts.

Advantage

Perforations allowing remote thermographic inspection without removal.

Rating (A)	No. of poles	Position	Reference
125 ... 200	3 P	top / bottom / front (I) / rear (II)	2694 3014 ⁽¹⁾⁽²⁾
125 ... 200	4 P	top / bottom / front (I) / rear (II)	2694 4014 ⁽¹⁾⁽²⁾
250 ... 400	3 P	top / bottom / front (I) / rear (II)	2694 3021 ⁽¹⁾⁽²⁾
250 ... 400	4 P	top / bottom / front (I) / rear (II)	2694 4021 ⁽¹⁾⁽²⁾
500 ... 630	3 P	top / bottom / front (I) / rear (II)	2694 3051 ⁽¹⁾⁽²⁾
500 ... 630	4 P	top / bottom / front (I) / rear (II)	2694 4051 ⁽¹⁾⁽²⁾

(1) To shroud front switch top and bottom 4 references required for a SIRCOVER and 6 references for a SIRCOVER BY-PASS.

(2) To shroud front switch top and bottom 2 references required for a SIRCOVER and a SIRCOVER BY-PASS.

Terminal screens

accres_207_a_2_cat



Use

Top or bottom protection against direct contact with terminals or connection parts.

Rating (A)	No. of poles	Position	Reference
125 ... 200	3 P	top / bottom	1509 3012
125 ... 200	4 P	top / bottom	1509 4012
250 ... 400	3 P	top / bottom	1509 3025
250 ... 400	4 P	top / bottom	1509 4025
500 ... 630	3 P	top / bottom	1509 3063
500 ... 630	4 P	top / bottom	1509 4063
800 ... 1 250	3 P	top / bottom	1509 3080
800 ... 1 250	4 P	top / bottom	1509 4080
1 600 ... 1 800	3 P	top / bottom	1509 3160
1 600 ... 1 800	4 P	top / bottom	1509 4160
2 000 ... 3 200	3 / 4 P	top / bottom	included

Inter phase barriers

accres_008_a_1_cat



Use

Safety isolating separation between the terminals, essential for use at 690 VAC or in a polluted or dusty atmosphere.

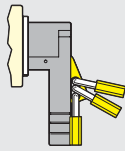
The terminal shrouds also provide phase separation from 125 to 630 A.

Rating (A)	No. of poles	Reference
125 ... 200	3 P	2998 0033 ⁽¹⁾
125 ... 200	4 P	2998 0034 ⁽¹⁾
250 ... 400	3 P	2998 0023 ⁽¹⁾
250 ... 400	4 P	2998 0024 ⁽¹⁾
500 ... 630	3 P	2998 0013 ⁽¹⁾
500 ... 630	4 P	2998 0014 ⁽¹⁾
800 ... 3200	3 / 4 P	included

(1) Use 2 sets per side.

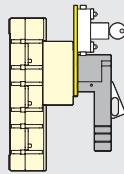
Handle key interlocking accessories

Fig. 1



access_061_a_1_x_cat

Fig. 2



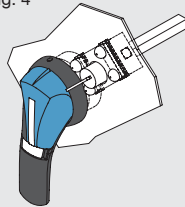
access_001_a_1_x_cat

Fig. 3



access_132_a_1_x_cat

Fig. 4



access_158_a_1_x_cat

Use

- using padlock (not supplied), this device is factory mounted in the direct or external operation handle and allows using up to 3 padlocks (Fig.1).
- Locking:
 - using lock (not supplied)
 - using undervoltage coil.

The interlocking positions are either determined as standard or configured by the user, removing pre-formed tabs.
Padlocking and locking can be combined.

Lockable in position I, 0 or II

Rating (A) SIRCOVER	Rating (A) SIRCOVER BY-PASS	Operation	Figure	Reference
125 ... 630	125 ... 200	external	1	1423 2813

Locking using RONIS EL11AP lock in position 0 (not included)

Rating (A) SIRCOVER	Rating (A) SIRCOVER BY-PASS	Operation	Figure	Reference
125 ... 630	125 ... 200	direct	2	4109 1006⁽¹⁾
	250 ... 630	direct	3	consult us
800 ... 1800	800 ... 1600	direct	3	4109 1004⁽²⁾
2000 ... 3200		direct	3	4109 2007
125 ... 1800	125 ... 630	external	4	1499 7701
2000 ... 3200	800 ... 1600	external	4	2799 7002

- (1) Specific handle included.
- (2) This locking facility can be configured by the user in the 3 positions.

Locking using RONIS EL11AP lock in position I, 0, II (not included)

Rating (A) SIRCOVER	Rating (A) SIRCOVER BY-PASS	Operation	Figure	Reference
125 ... 630	125 ... 200	direct	2	4109 1002⁽¹⁾
	250 ... 630	direct	3	consult us
800 ... 1800	800 ... 1600	direct	3	4109 1004⁽²⁾
2000 ... 3200		direct	3	4109 2007
125 ... 1800	125 ... 630	external	4	1499 7701
	800 ... 1600	external	4	2799 7002

- (1) Specific handle included.
- (2) This locking facility can be configured by the user in the 3 positions.

Locking using 230 VAC undervoltage coil in position 0 (factory fitted)

Rating (A) SIRCOVER	Rating (A) SIRCOVER BY-PASS	Operation	Figure	Reference
800 ... 3200	800 ... 1600	direct	3	consult us

Locking using CASTELL type K lock (not included)

Rating (A) SIRCOVER	Rating (A) SIRCOVER BY-PASS	Operation	Figure	Reference
125 ... 1800	125 ... 630	external	4	1499 7702
2000 ... 3200	800 ... 1600	external	4	2799 7003

Other specific accessories



bid_03_04_01

- Customised protection screens (for specific dimensions or high ambient temperatures).
- Inter phase barrier.
- Connection accessories.
- Low level auxiliary contacts.

125 to 500 A

Thermal current I_{th} (40°C)	125 A	160 A	200 A	250 A	400 A	500 A
Rated insulation voltage U_i (V)	800	800	800	800	800	1000
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8	8	12

Rated operational currents I_e (A)

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
400 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	400/400	500/500
400 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	250/250	400/400	500/500
400 VAC	AC-23 A / AC-23 B	125/125	160/160	160/160	250/250	250/250	500/500
690 VAC ⁽²⁾	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	400/400	500/500
690 VAC ⁽²⁾	AC-21 A / AC-21 B	125/125	160/160	160/160	200/250	200/250	400/400
690 VAC ⁽²⁾	AC-22 A / AC-22 B	125/125	125/125	125/125	125/160	125/160	250/315
690 VAC ⁽²⁾	AC-23 A / AC-23 B	63/80	63/80	63/80	100/125	100/125	160/200
220 VDC	DC-20 A / DC-20 B	125/125	160/160	200/200	250/250	400/400	500/500
220 VDC	DC-21 A / DC-21 B	125/125	160/160	160/160	250/250	250/250	500/500
220 VDC	DC-22 A / DC-22 B	125/125	160/160	160/160	250/250	250/250	400/500
220 VDC	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	400/400
440 VDC	DC-20 A / DC-20 B	125/125	160/160	200/200	250/250	400/400	500/500
440 VDC	DC-21 A / DC-21 B	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	400 ⁽³⁾ /400 ⁽³⁾
440 VDC	DC-22 A / DC-22 B	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	315 ⁽³⁾ /400 ⁽³⁾
440 VDC	DC-23 A / DC-23 B	125 ⁽⁴⁾ /125 ⁽⁴⁾	125 ⁽⁴⁾ /125 ⁽⁴⁾	125 ⁽⁴⁾ /125 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	400 ⁽⁴⁾ /400 ⁽⁴⁾

Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾	63/63	80/80	80/80	132/132	132/132	280/280
At 690 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾	55/75	55/75	55/75	90/110	90/110	150/185

Reactive power (kvar)

At 400 VAC ⁽⁶⁾	55	75	90	115	185	230
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Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit (kA rms) ⁽⁶⁾	100	100	50	50	18	100
Associated fuse rating (A) ⁽⁶⁾	125	160	200	250	400	500

Overload capacity

Rated short-time withstand current 0.3 s. I_{cw} (kA eff.)	15	15	15	17	17	25
Rated peak withstand current (kA peak) ⁽⁶⁾	20	20	20	30	30	45

Connection

Minimum Cu cable section (mm ²)	35	50	50	95	185	240
Minimum Cu busbar section (mm ²)						
Maximum Cu cable section (mm ²)	50	95	95	150	240	240
Maximum Cu busbar width (mm)	25	25	25	32	32	40
Tightening torque min (Nm)	9	9	9	20	20	20

Mechanical characteristics

Durability (number of operating cycles) ⁽⁷⁾	10 000	10 000	10 000	10 000	10 000	5 000
Weight of 3 P switch (kg)	1.5	1.6	1.8	2	3	3.5
Weight of 4 P switch (kg)	1.6	1.7	1.9	2.1	3.5	4

- (1) Category with index A = frequent operation - Category with index B = infrequent operation.
 (2) With terminal shrouds or phase barrier.
 (3) 3-pole device with 2 pole in series for the "+" and 1 pole for the "-".
 (4) 4-pole device with 2 pole in series by polarity.
 (5) The power value is given for information only, the current values vary from one manufacturer to another.
 (6) For a rated operational voltage $U_n = 400$ VAC.
 (7) Increased endurance: please consult us.

630 to 3200 A

Thermal current I_{th} (40°C)	630 A	800 A	1250 A	1600 A	1800 A	2000 A	2500 A	3200 A
Rated insulation voltage U_i (V)	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)	12	12	12	12	12	12	12	12

Rated operational currents I_e (A)

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
400 VAC	AC-21 A / AC-21 B	630/630	800/800	1250/1250	1600/1600	1800/1800	2000/2000	2500/2500	3200/3200
400 VAC	AC-22 A / AC-22 B	630/630	800/800	1250/1250	1600/1600	1800/1800	2000/2000	2000/2500	2500/3200
400 VAC	AC-23 A / AC-23 B	500/500	800/800	1250/1250	1250/1250	1250/1250	1600/1600	1600/1600	1600/1600
690 VAC ⁽²⁾	AC-20 A / AC-20 B	630/630	800/800	1250/1250	1600/1600	1800/1800	2000/2000	2500/2500	3200/3200
690 VAC ⁽²⁾	AC-21 A / AC-21 B	500/500	800/800	800/800	1000/1000	1000/1000	2000/2000	2000/2500	2000/2500
690 VAC ⁽²⁾	AC-22 A / AC-22 B	315/315	800/800	800/800	1000/1000	1000/1000	1000/1000	1000/1000	1000/1000
690 VAC ⁽²⁾	AC-23 A / AC-23 B	160/200	200/250	200/250	500/500	500/500	800/800	800/800	800/800
220 VDC	DC-20 A / DC-20 B	630/630	800/800	1250/1250	1600/1600	1800/1800	2000/2000	2500/2500	3200/3200
220 VDC	DC-21 A / DC-21 B	630/630	800/800	1250/1250	1250/1250	1250/1250	2000/2000	2000/2500	2000/2500
220 VDC	DC-22 A / DC-22 B	500/500	800/800	1250/1250	1250/1250	1250/1250	1250/1600	1250/1600	1250/1600
220 VDC	DC-23 A / DC-23 B	500/500	800/800	1250/1250	1250/1250	1250/1250	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾
440 VDC	DC-20 A / DC-20 B	630/630	800/800	1250/1250	1600/1600	1800/1800	2000/2000	2500/2500	3200/3200
440 VDC	DC-21 A / DC-21 B	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽³⁾ /800 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	2000/2000	2000/2000	2000/2000
440 VDC	DC-22 A / DC-22 B	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽³⁾ /800 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾
440 VDC	DC-23 A / DC-23 B	500 ⁽⁴⁾ /500 ⁽⁴⁾	800 ⁽³⁾ /800 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1000 ⁽³⁾ /1000 ⁽³⁾	1000 ⁽³⁾ /1000 ⁽³⁾	1000 ⁽³⁾ /1000 ⁽³⁾

Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾	280/280	450/450	710/710	710/710	710/710	710/710	710/710	710/710	710/710
At 690 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾	150/185	185/220	185/220	475/475	475/475	750/750	750/750	750/750	750/750

Reactive power (kvar)

At 400 VAC ⁽⁵⁾	290	365	575						
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Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit (kA rms) ⁽⁶⁾	70	50	100	100	100	100	100		
Associated fuse rating (A) ⁽⁶⁾	630	800	1250	2 x 800	2 x 800	2 x 1000	2 x 1250		

Overload capacity

Rated short-time withstand current 0.3 s. I_{ow} (kA eff.)	25	50	65	100	100	100	100	110	110
Rated peak withstand current (kA peak) ⁽⁶⁾	45	55	80	110	110	110	110	120	120

Connection

Minimum Cu cable section (mm ²)	2 x 150	2 x 185							
Minimum Cu busbar section (mm ²)	2 x 30 x 5	2 x 40 x 5	2 X 60 X 5	2 x 80 x 5	2 x 80 x 5	3 x 100 x 5	4 x 100 x 5	4 x 100 x 5	
Maximum Cu cable section (mm ²)	2 x 300	2 x 300	4 X 185	6 x 185	6 x 185				
Maximum Cu busbar width (mm)	50	63	63	100	100	125	125	125	
Tightening torque min (Nm)	20		20	40	40	40	40	40	

Mechanical characteristics

Durability (number of operating cycles) ⁽⁷⁾	5 000	3 000	3 000	4 000	4 000	3 000	3 000	3 000	
Weight of 3 P switch (kg)	3.5	17.5	22.5	34	34	50	50	50	
Weight of 4 P switch (kg)	4	21	27.5	42	42	60	60	60	

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

(3) 3-pole device with 3 pole in series for the "+" and 1 pole for the "-".

(4) 4-pole device with 2 pole in series per polarity.

(5) The power value is given for information only, the current values vary from one manufacturer to another.

(6) For a rated operational voltage $U_n = 400$ VAC.

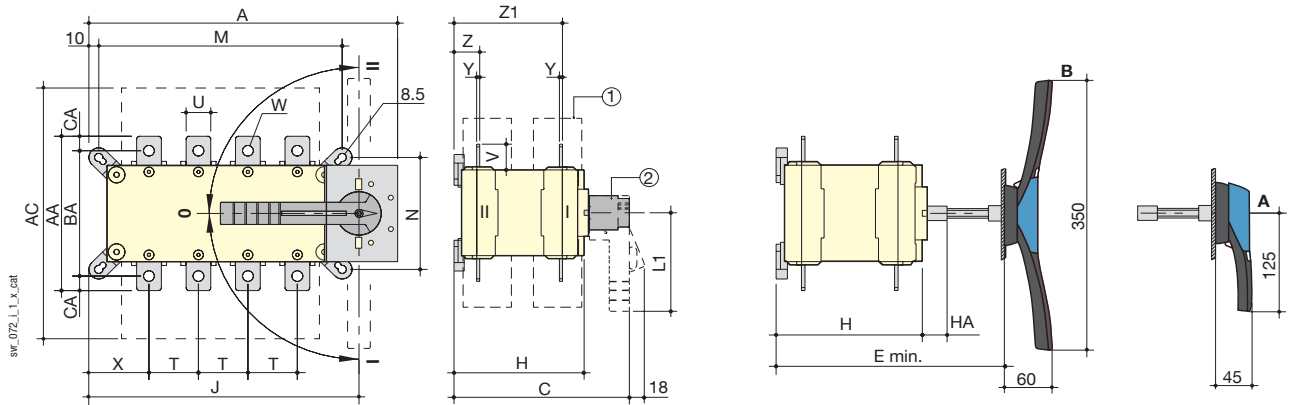
(7) Increased endurance: please consult us.

➔ SIRCOVER and SIRCOVER BY-PASS - Dimensions

SIRCOVER 125 to 1800 A

Direct front operation

External front operation



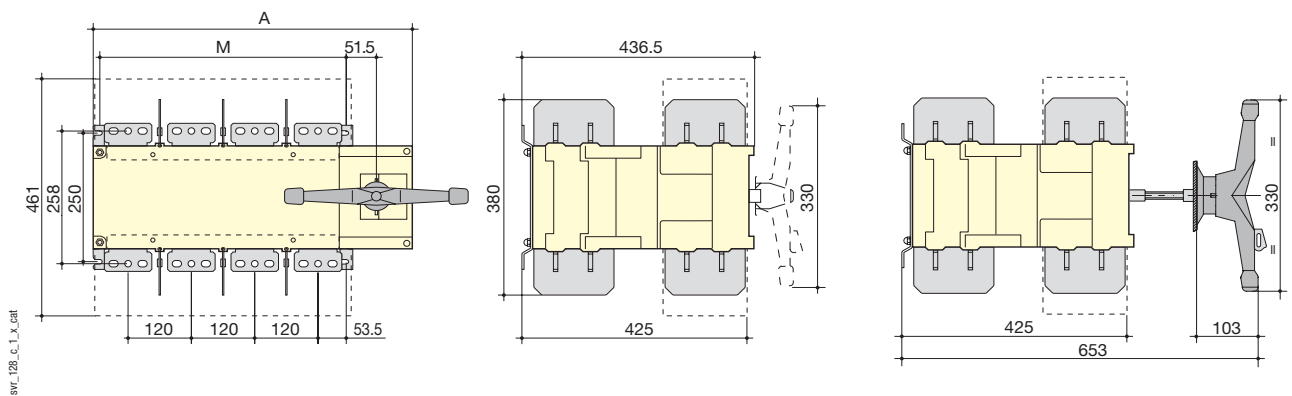
A. S2 type handle for external operation: 125 to 630 A
B. S4 type handle for external operation: 800 to 1800 A

1. Terminal shrouds
2. Direct handle operation:
- 125 to 630 A: L1 = 140 mm,
- 800 to 1800 A: L1 = 210 mm.

Rating (A)	Overall dimensions				Terminal shrouds	Switch body				Switch mounting				Connection										
	A 3p.	A 4p.	C	E min		AC	H	HA	J 3p.	J 4p.	M 3p.	M 4p.	N	T	U	V	W	X 3p.	X 4p.	Y	Z	Z1	AA	BA
125	221	251	218	208 ... 436	235	148	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	135	115	10
160	221	251	218	208 ... 436	235	148	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	135	115	10
200	221	251	218	208 ... 436	235	148	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	135	115	10
250	262	312	218	208 ... 436	280	148	25	223	273	196	246	116	50	25	30	11	61	61	3.5	30	124	160	130	15
400	262	312	218	208 ... 436	280	148	25	223	273	196	246	116	50	35	35	11	61	61	3.5	30	124	170	140	15
500	319	379	295	285 ... 513	401	225	25	272	332	246	306	176	65	32	37	13	70.5	65.5	5	43	180	235	205	15
630	319	379	295	285 ... 513	400	225	25	272	332	246	306	176	65	45	50	13	70.5	65.5	5	43	180	260	220	20
800	386	466	375	425 ... 577	459	298	29	306.5	386.5	255	336	250	80	50	60.5	15	48	48	7	66.5	253.5	321		26.5
1250	386	466	375	425 ... 577	459	298	29	306.5	386.5	255	336	250	80	60	65	16x11	48	48	7	66.5	255.5	330		29.5
1600	478	598	375	425 ... 577	461	298	29	306.5	388.5	347	467	250	120	90	43.5	12.5x5	54	54	8	66.5	255.5	288		15
1800	478	598	375	425 ... 577	461	298	29	388.5	518.5	347	467	250	120	90	43.5	12.5x5	54	54	8	66.5	255.5	288		15

SIRCOVER 2000 to 3200 A

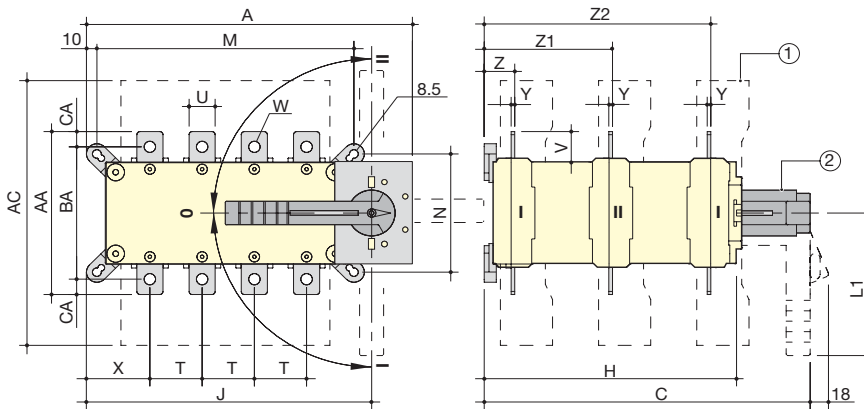
Direct front operation



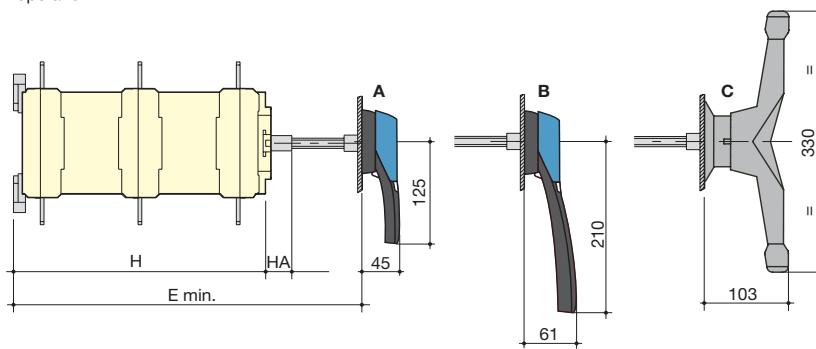
Rating (A)	Overall dimensions		Switch mounting	
	A 3p.	A 4p.	M 3p.	M 4p.
2000 ... 3200	478	598	347	467

SIRCOVER BY-PASS 125 to 1600 A

Direct front operation



External front operation



- A. S2 type handle for external operation:
125 to 200 A
- B. S3 type handle for external operation:
250 to 630 A
- C. External double lever handle: 800 to 1600 A

- 1. Terminal shrouds
- 2. Direct handle operation:
- 125 to 200 A: L1 = 140 mm,
- 250 to 630 A: L1 = 210 mm,
- 800 to 1600 A: L1 = Ø 330 mm.

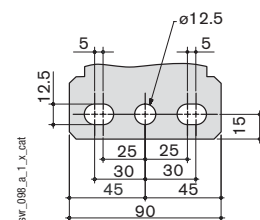
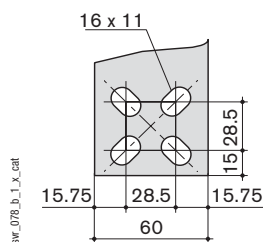
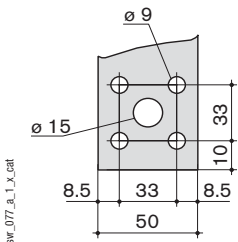
Rating (A)	Overall dimensions			Terminal shrouds	Switch body				Switch mounting				Connection				AA	BA	AC						
	A 3+6p.	A 4+8p.	C		E min.	AC	H	HA	J 3+6 p.	J 4+8 p.	M 3+6 p.	M 4+8 p.	N	T	U	V				W	X 3+6p.	X 4+8p.	Y	Z	Z1
125	221	251	313	320	235	243	25	182	212	156	186	101	36	20	25	8,5	56	50	3,5	28	124	219	135	115	10
160	221	251	313	320	235	243	25	182	212	156	186	101	36	20	25	8,5	56	50	3,5	28	124	219	135	115	10
200	221	251	313	320	235	243	25	182	212	156	186	101	36	20	25	8,5	56	50	3,5	28	124	219	135	115	10
250	262	312	313	298	280	243	25	223	273	196	246	116	50	25	30	11	61	61	3,5	30	124	219	160	130	10
400	262	312	313	298	280	243	25	223	273	196	246	116	50	35	35	11	61	61	3,5	30	124	219	170	140	15
500	319	379	432	417	401	362	25	272	332	246	306	176	65	32	37	13	70.5	65.5	5	43	180	317	235	205	15
630	319	379	432	417	400	362	25	272	332	246	306	176	65	45	50	13	70.5	65.5	5	43	180	317	260	220	20
800	386	466	560	550	459	479	29	306.5	386.5	255	335	250	80	50	60.5	15	48	48	7	66.5	253.5	439.5	321		26.5
1250	386	466	560	550	459	479	29	306.5	386.5	255	335	250	80	60	65	16x11	48	48	7	66.5	253.5	439.5	320		29.25
1600	478	598	560	550	461	479	29	388.5	518.5	347	467	250	120	90	43.5	12.5x5	54	54	8	66.5	253.5	439.5	288		15

➤ Connection terminals

SIRCOVER and SIRCOVER BY-PASS 800 A

SIRCOVER and SIRCOVER BY-PASS 1250 A

SIRCOVER 1600 to 3200 A
SIRCOVER BY-PASS 1600 A



➔ Dimensions for external handles

SIRCOVER 125 to 630 A

Handle type	Direction of operation	Front operation	
		Door drilling	
S2 type			

(1) Ø31 to Ø37: rear screw mounting
Ø37: front clip mounting.

SIRCOVER 800 to 1800 A

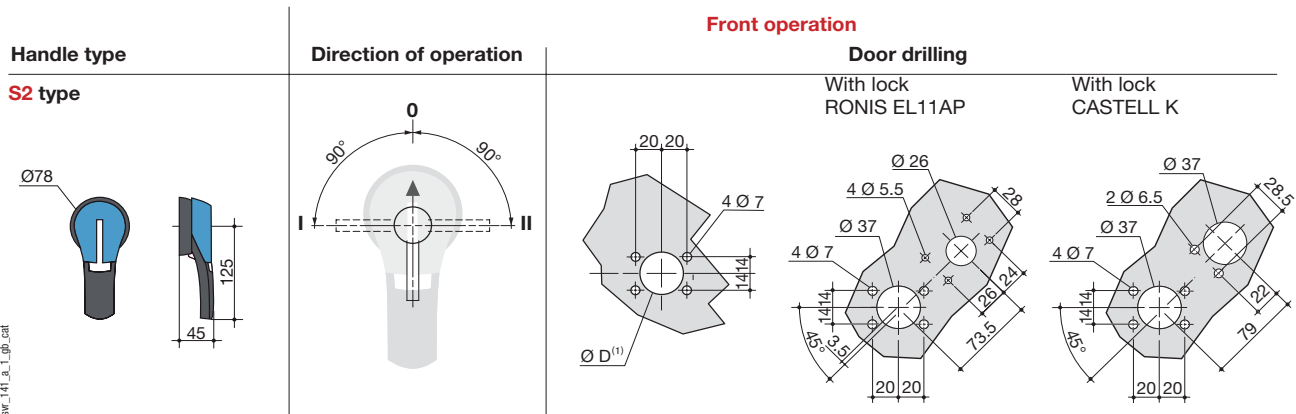
Handle type	Direction of operation	Front operation	
		Door drilling	
S4 type			

(1) Ø31 to Ø37: rear screw mounting
Ø37: front clip mounting.
(2) Ø6 to Ø7: fast fixing.

SIRCOVER 2000 to 3200 A

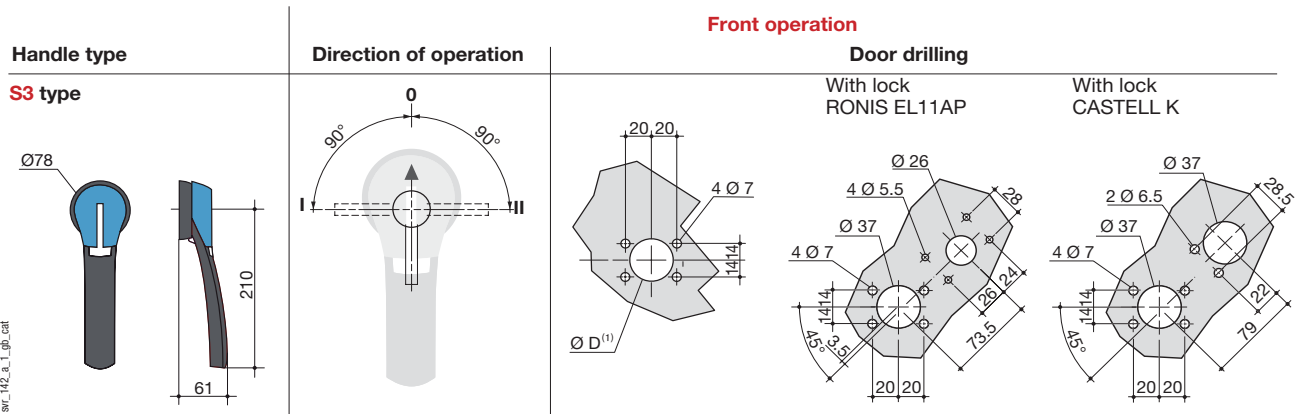
Handle type	Direction of operation	Front operation	
		Door drilling	
C type			

SIRCOVER BY-PASS 125 to 200 A



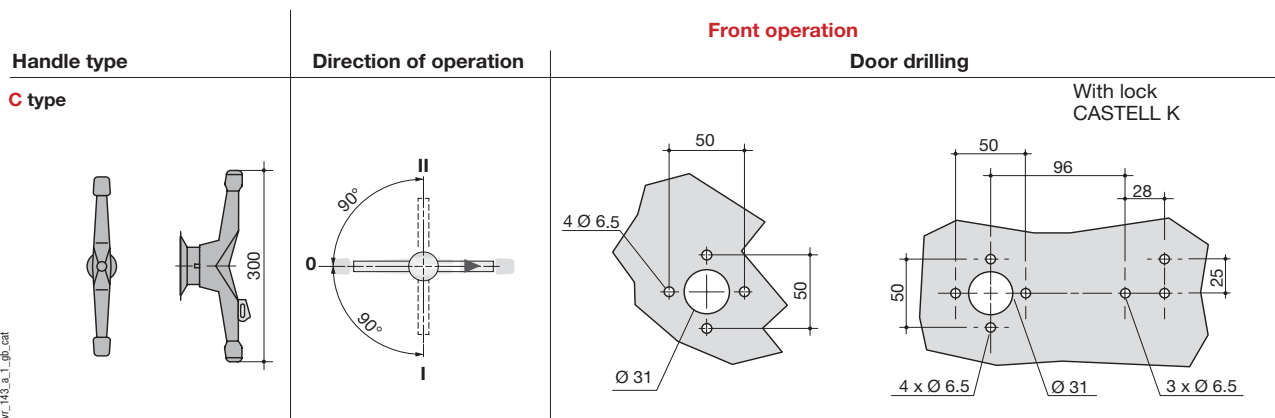
(1) Ø31 to Ø37: rear screw mounting Ø37: front clip mounting.

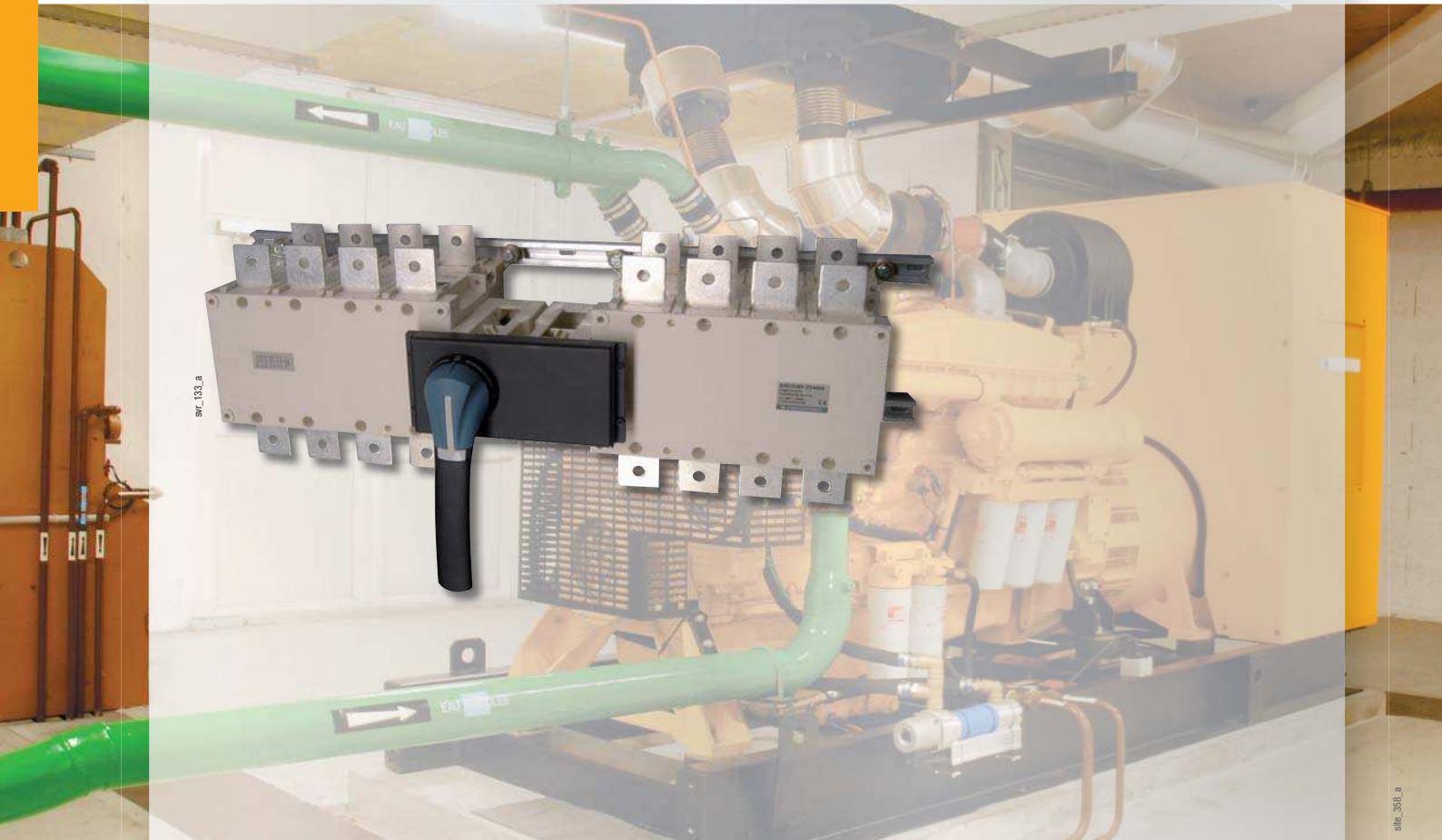
SIRCOVER BY-PASS 250 to 630 A



(1) Ø31 to Ø37: rear screw mounting Ø37: front clip mounting.

SIRCOVER BY-PASS 800 to 1600 A





From 125 to 1600 A

Function

ATS BY-PASS are designed to isolate ATS type electrical equipment (automatic transfer switch) without interrupting the load supply. With the SOCOMEC **ATS BY-PASS** system, top and bottom isolation is achieved simultaneously. Integrating a SOCOMEC changeover switch into the installation allows the source used for bypassing to be selected.

General characteristics

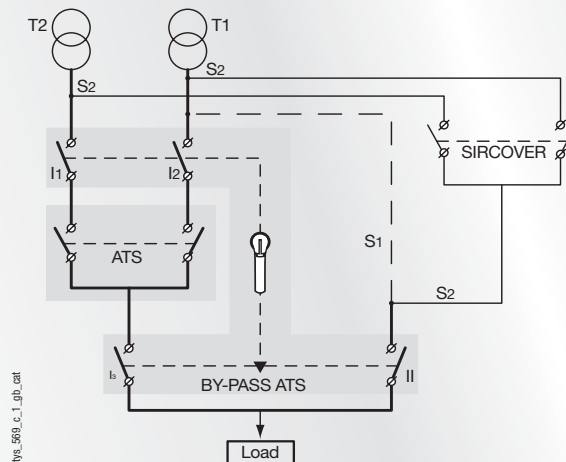
- From 125 to 1600 A.
- Available with 4 poles only.
- Manual operation.
- 3 stable positions (I, 0, II) and ease to switch from one to the other under load (AC-22).
- Fully visualized breaking.
- Mechanical interlocking.
- IP20 devices and accessories.
- Direct and external operation.

Accessories

- Bridging bar.
- Auxiliary contact.
- Terminals protection screen.
- Terminal shrouds.
- Key handle interlocking system
- Different optional accessories are available.

Conformity to standards

- IEC 60947-3
- S 14947-3
- EN 60947-3
- VDE 0660-107 (1992)
- NBN EN 60947-3
- BS EN 60947-3



Operating principle

- Without SIRCOVER: load is supplied by one of the two power sources (transformer T1 for example).
- With a SIRCOVER: the source to be used for the supply during BYPASS can be selected.

References



Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft extensions for external handle	Bridging bars	Auxiliary contacts (1 per position)	Terminal shrouds (1 set)	Terminal screens (1 per position)
125 A	12 + 4 P	4100 9813	Type S3 Black IP65 I - 0 - II 1433 3113	Type S3 Black IP65 I - 0 - II 1433 3113	200 mm 1401 1520	1 P 4109 0019	1 st contact NO/NF included 2 nd contact NO/NC 4109 0021	4 P 2694 4014 ⁽¹⁾⁽²⁾	4 P 1509 4012 ⁽³⁾
160 A	12 + 4 P	4100 9816							
250 A	12 + 4 P	4100 9825							
400 A	12 + 4 P	4100 9840							
630 A	12 + 4 P	4100 9863							
800 A	12 + 4 P	4100 9880	Black 2799 7062	Black IP65 I - 0 - II 2799 7147 ⁽⁴⁾	400 mm 1401 1540	1 P 4109 0039	included	consult us	4 P 1509 4025 ⁽³⁾
1000 A	12 + 4 P	4100 9881							
1250 A	12 + 4 P	4100 9882							
1600 A	12 + 4 P	4100 9886							
						1 P 4109 0063		4 P 2694 4051 ⁽¹⁾⁽²⁾	4 P 1509 4063 ⁽³⁾
						1 P 4109 0080			
						1 P 4109 0160			

(1) To fully shroud front, rear, top and bottom 8 references required.

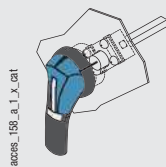
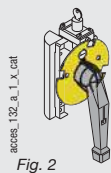
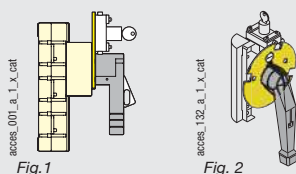
(2) To shroud front switch top and bottom 4 references required.

(3) Top/bottom.

(4) Shaft extension for external handle included.

Accessories

Key handle interlocking system



Locking using RONIS EL11AP lock in position 0 (not included)

Rating (A)	Operation	Figure	Reference
125 ... 630	direct	1	4109 1006 ⁽¹⁾
125 ... 630	external	3	1499 7701
800 ... 1600	direct and external	2	consult us

(1) Specific handle included.

Locking using RONIS EL11AP lock in positions I, 0, II (not supplied)

Rating (A)	Operation	Figure	Reference
125 ... 630	direct	1	4109 1002 ⁽¹⁾
800 ... 1600	direct	2	consult us

(1) Specific handle included.

Locking using CASTELL type K lock (not included)

Rating (A)	Operation	Figure	Reference
125 ... 630	external	3	1499 7702
800 ... 1600	external		consult us

➔ **ATS BY-PASS - Characteristics according to IEC 60947-3**

125 to 1600 A

Thermal current I_{th} (40°C)	125 A	160 A	250 A	400 A	630 A	800 A	1000 A	1250 A	1600 A
Rated insulation voltage U_i (V)	800	800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8	12	12	12	12	12

Rated operational currents I_n (A)

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
400 VAC	AC-21 A / AC-21 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
400 VAC	AC-22 A / AC-22 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
400 VAC	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	500/500	800/800	1000/1000	1250/1250	1250/1250
690 VAC ⁽²⁾	AC-20 A / AC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
690 VAC ⁽²⁾	AC-21 A / AC-21 B	125/125	160/160	200/250	200/250	500/500	800/800	800/800	800/800	1000/1000
690 VAC ⁽²⁾	AC-22 A / AC-22 B	125/125	125/125	125/160	125/160	315/315	800/800	800/800	800/800	1000/1000
690 VAC ⁽²⁾	AC-23 A / AC-23 B	63/80	63/80	100/125	100/125	160/200	200/250	200/250	200/250	500/500
220 VDC	DC-20 A / DC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
220 VDC	DC-21 A / DC-21 B	125/125	160/160	250/250	250/250	630/630	800/800	1000/1000	1250/1250	1250/1250
220 VDC	DC-22 A / DC-22 B	125/125	160/160	250/250	250/250	500/500	800/800	1000/1000	1250/1250	1250/1250
220 VDC	DC-23 A / DC-23 B	125/125	125/125	200/200	200/200	500/500	800/800	1000/1000	1250/1250	1250/1250
440 VDC	DC-20 A / DC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250/1250	1600/1600
440 VDC	DC-21 A / DC-21 B	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾
440 VDC	DC-22 A / DC-22 B	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾
440 VDC	DC-23 A / DC-23 B	125 ⁽⁴⁾ /125 ⁽⁴⁾	125 ⁽⁴⁾ /125 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	500 ⁽⁴⁾ /500 ⁽⁴⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾

Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾	63/63	80/80	132/132	132/132	280/280	450/450	560/560	560/560	710/710
At 690 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾	55/75	55/75	90/110	90/110	150/185	185/220	185/220	185/220	475/475

Reactive power (kvar)

At 400 VAC ⁽⁶⁾	55	75	115	185	290	365	575	575	
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Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit (kA rms) ⁽⁶⁾	100	100	50	18	70	50	100	100	100
Associated fuse rating (A) ⁽⁶⁾	125	160	250	400	630	800	1000	1250	2 x 800

Overload capacity

Rated short-time withstand current 1 s. I_{cw} (kA eff.)	7	7	9	9	13	26	35	35	50
Closing capacity on short-circuit (kA peak) ⁽⁶⁾	20	20	30	30	45	55	80	80	110

Connection

Minimum Cu cable section (mm ²)	35	50	95	185	2 x 150	2 x 185	2 x 240		
Minimum Cu busbar section (mm ²)					2 x 30 x 5	2 x 40 x 5	2 x 50 x 5	2 x 60 x 5	2 x 80 x 5
Maximum Cu cable section (mm ²)	50	95	150	240	2 x 300	2 x 300	4 x 185	4 x 185	6 x 185
Maximum Cu busbar width (mm)	25	25	32	32	50	63	63	63	100
Tightening torque min (Nm)	9	9	20	20	20			20	40

Mechanical characteristics

Durability (number of operating cycles) ⁽⁷⁾	10 000	10 000	10 000	10 000	5 000	3 000	3000	3 000	4 000
Weight of 3 P switch (kg)	1.5	1.6	2	3	3.5	17.5		22.5	34
Weight of 4 P switch (kg)	1.6	1.7	2.1	3.5	4	21		27.5	42

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

(3) 3-pole device with 2 pole in series for the "+" and 1 pole for the "-".

(4) 4-pole device with 2 pole in series by polarity.

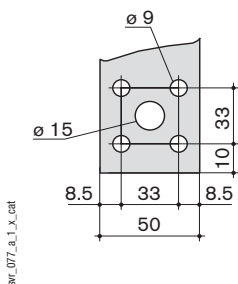
(5) The power value is given for information only, the current values vary from one manufacturer to another.v

(6) For a rated operational voltage $U_n = 400$ VAC.

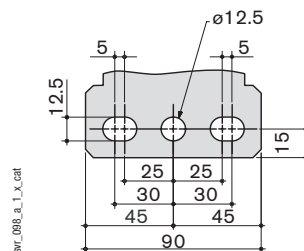
(7) Increased durabilities: please consult us.

➔ **Connection terminals**

ATS BY-PASS 800 to 1000 A



ATS BY-PASS 1250 to 1600 A

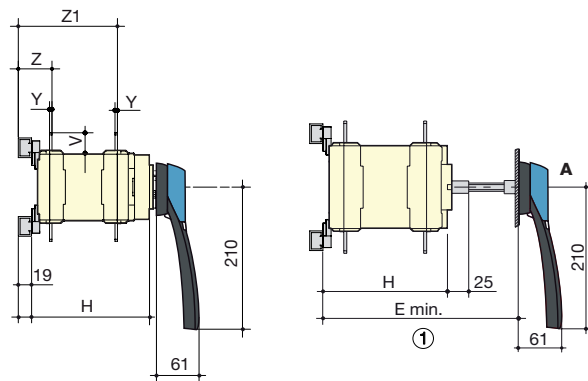
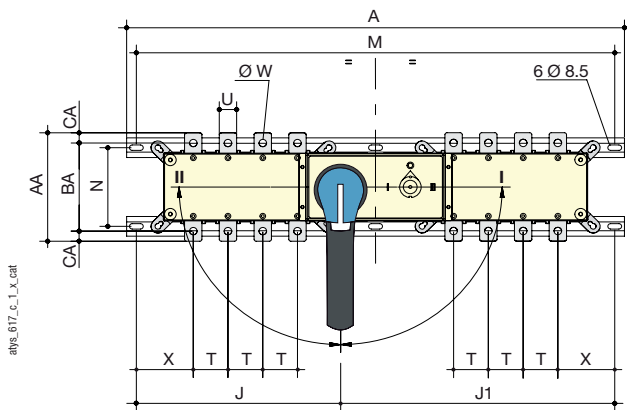


➤ Dimensions

ATS BY-PASS 125 to 630 A

Direct front operation

External front operation



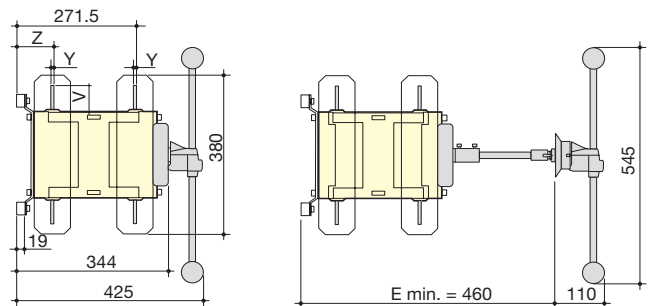
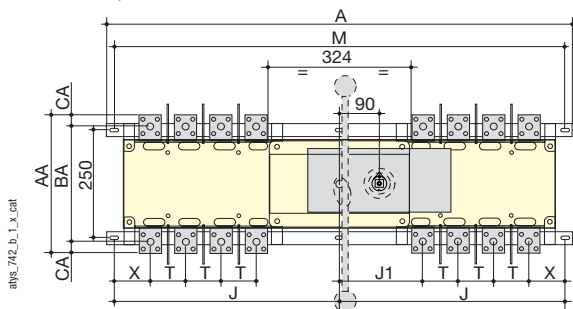
A. S3 type handle for external front operation: 125 to 630 A.
1. Minimum length with shaft extension: E min + 50 mm.

Rating (A)	Overall dimensions		Switch body			Switch mounting		Connection			V	W	X 8p.	Y	Z	Z1	AA	BA	AC
	A 8p.	E min	H	J 8p.	J1 8p.	M 8p.	N	T	U										
125	610	260±1	193	238	338	576	101	36	20	25	8.5	76	3.5	47	143	135	115	10	
160	610	260±1	193	238	338	576	101	36	20	25	8.5	76	3.5	47	143	135	115	10	
250	725	260±1	193	295	396	691	116	50	25	30	11	83.5	3.5	49	143	160	130	10	
400	725	260±1	193	295	396	691	116	50	35	35	11	83.5	3.5	49	143	170	140	15	
630	850	337±1	270	358	458	816	176	65	45	50	13	91.5	5	62	199	235	220	20	

ATS BY-PASS 800 to 1600 A

Direct front operation

External front operation

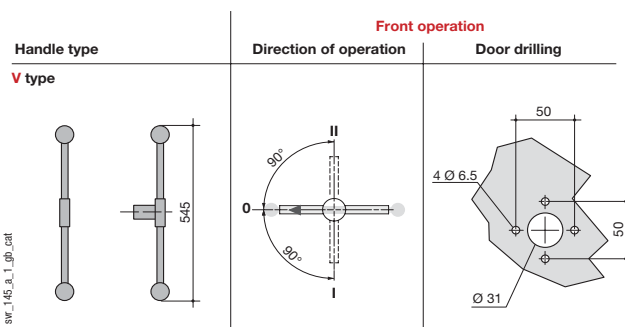
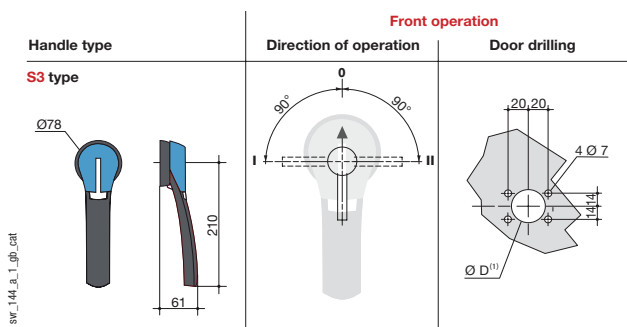


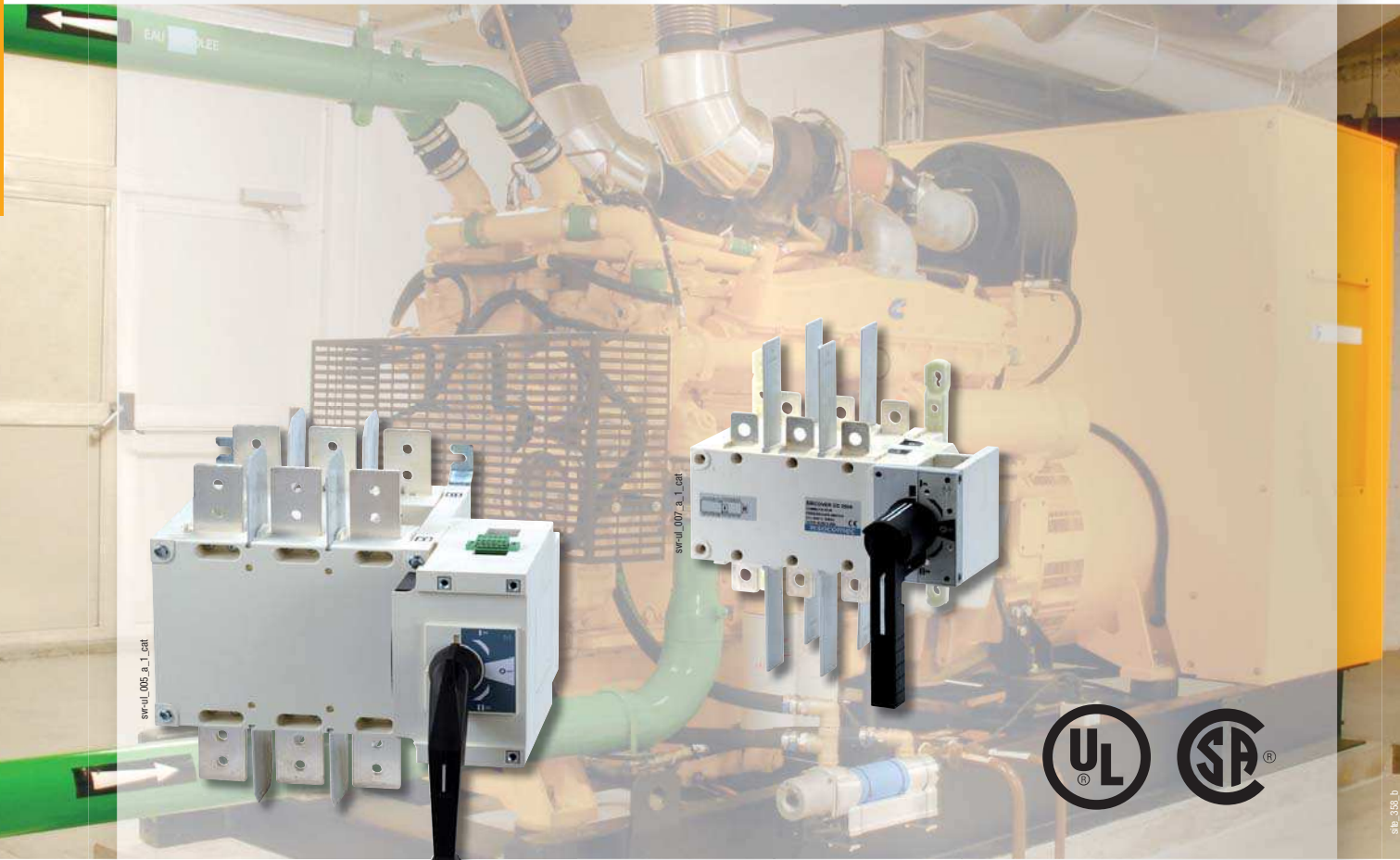
Rating (A)	Overall dimensions		Switch body			Switch mounting		Connection			AA	BA	AC
	A 8p.	J 8p.	J1 8p.	M 8p.	T	V	X 8p.	Y	Z				
800	1 055	510.5	189	1 021	80	60.5	81.5	7	84.5	321	268	26.5	
1000	1 055	510.5	189	1 021	80	60.5	81.5	7	84.5	321	268	26.5	
1250	1 320	643	195	1 286	120	44	88	8	85.5	288	258	15	
1600	1 320	643	195	1 286	120	44	88	8	85.5	288	258	15	

➤ Dimensions for external handles

ATS BY-PASS 125 to 630 A

ATS BY-PASS 800 to 1600 A





100 to 1200 A

➤ Function

SIRCOVER are heavy duty manual transfer switches. They ensure switching transfer of sources or transfer of two low voltage circuits on load as well as their safety disconnection.

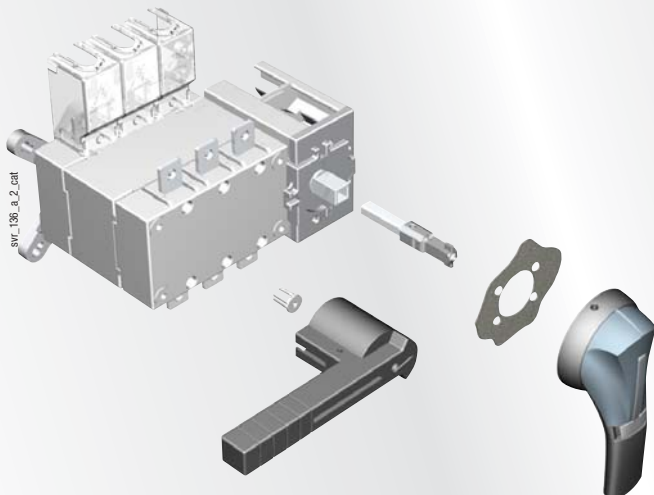
These switches are extremely durable and are tested and approved for use in the most demanding applications as resistive load or total system applications.

➤ General characteristics

- 3 stable positions (I, 0, II).
- On load switching.
- Direct or external handle.
- 480VAC total system.
- 600VAC resistive load.
- Back to back construction compact foot print

➤ Conformity to standards

- UL98, Guide WHTY, file 201138
- UL1008, Guide WPHY, file 317092
- CSA 22.2#4, Class 4651-02
- IEC 60947-3



➔ References



UL 1008 and UL98

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contacts	Terminal screens	
100 A	3 P	4150 3011 ⁽¹⁾	Black 4199 4012	S2 type Black I - 0 - II 4, 4X 142D 2113	200 mm 7.9 inches 1400 1020	3P 4159 3021 4P 4159 4021	Contact NO/NC 4159 0021 Low level 4159 0022	3P 4158 3021 4P 4158 4021	
	4 P	4150 4011 ⁽¹⁾							
200 A	3 P	4150 3021 ⁽¹⁾		S2 type Black I - 0 - II 4, 4X 142D 2813 ⁽²⁾	400 mm 15.7 inches 1400 1040	3P 4159 3041 4P 4159 4041		3P 4158 3041 4P 4158 4041	
	4 P	4150 4021 ⁽¹⁾							
400 A	3 P	4150 3041 ⁽¹⁾		S3 type Black I - 0 - II 4, 4X 143D 3113	200 mm 7.9 inches 1401 1520	3P 4159 3063 4P 4159 4063		3P 1609 3063 4P 1609 4063	
	4 P	4150 4041 ⁽¹⁾							
600 A	3 P	4150 3060		S3, S4 type 200 mm 7.9 inches 1401 1532	400 mm 15.7 Inches 1401 1540	3P 4159 3080 4P 4159 4080		3P 1609 3080 4P 1609 4080	
	4 P	4150 4060							
800 A	3 P	4150 3080		Black 4199 7062	S4 type Black I - 0 - II 4, 4X 144D 3813 ⁽²⁾	320 mm 12.6 Inches 1401 1532		Contact NO/NC as standard	
	4 P	4150 4080							
1200 A	3 P	4150 3120			S4 type Black I - 0 - II 4, 4X 144D 3813 ⁽²⁾	320 mm 12.6 Inches 1401 1532		3P 4159 3080 4P 4159 4080	3P 1609 3080 4P 1609 4080
	4 P	4150 4120							

(1) New range, all ratings are UL98 certified, ratings 100A, 200A and 400A will by UL 1008 certified from January 2011.
 For MTS, from 100A to 400A UL 1008 certified, see our website.

(2) Padlockable in all 3 positions.

➔ SIRCOVER UL - Accessories

Direct handle



Rating (A)	Colour	Handle type	Reference
100 ... 400	Black	1 lever	4199 4012
600	Black	2 lever	4199 7012
800 ... 1250	Black	2 lever	4199 7062

External handle

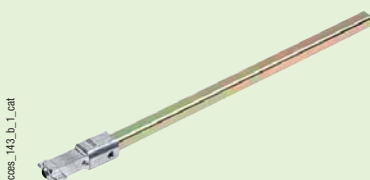


Use

The handle interlocking function prevents the user from opening the door of the enclosure when the switch is in the "ON" position. Opening the door when the switch is in the "ON" position is possible by defeating the interlocking function with the use of a tool (authorized persons only). The interlocking function is restored when the door is re-closed.

Rating (A)	Handle type	Colour	Nema type	Lockable in 3 positions	Reference
100 ... 200	S2	Black	4, 4X	no	142D 2113
100 ... 200	S2	Red/Yellow	4, 4X	no	142E 2113
100 ... 200	S2	Black	1, 3R, 12	no	142F 2113
100 ... 200	S2	Red/Yellow	1, 3R, 12	no	142G 2113
100 ... 200	S2	Black	4, 4X	yes	142D 2813
100 ... 200	S2	Red/Yellow	4, 4X	yes	142E 2813
100 ... 200	S2	Black	1, 3R, 12	yes	142F 2813
100 ... 200	S2	Red/Yellow	1, 3R, 12	yes	142G 2813
400 ... 600	S3	Black	4, 4X	no	143D 3113
400 ... 600	S3	Red/Yellow	4, 4X	no	143E 3113
400 ... 600	S3	Black	1, 3R, 12	no	143F 3113
400 ... 600	S3	Red/Yellow	1, 3R, 12	no	143G 3113
400 ... 600	S3	Black	4, 4X	yes	143D 3813
400 ... 600	S3	Red/Yellow	4, 4X	yes	143E 3813
400 ... 600	S3	Black	1, 3R, 12	yes	143F 3813
400 ... 600	S3	Red/Yellow	1, 3R, 12	yes	143G 3813
800 ... 1200	S4	Black	4, 4X	no	144D 3113
800 ... 1200	S4	Black	1, 3R, 12	no	144E 3113
800 ... 1200	S4	Black	1, 3R, 12	no	144E 3113
800 ... 1200	S4	Red/Yellow	1, 3R, 12	no	144G 3113
800 ... 1200	S4	Black	4, 4X	yes	144D 3813
800 ... 1200	S4	Red/Yellow	4, 4X	yes	144E 3813
800 ... 1200	S4	Black	1, 3R, 12	yes	144F 3813
800 ... 1200	S4	Red/Yellow	1, 3R, 12	yes	144G 3813
800 ... 1200	V1	Black	1	no	4199 7149

Shaft for external handle



Rating (A)	Handle type	Length (in)	Length (mm)	Cote X (in)	Cote X (mm)	Reference
100 ... 200	S2 type	7.9	200	5.31 ... 10.43	135 ... 265	1400 1020
100 ... 200	S2 type	12.6	320	3.74 ... 20.87	95 ... 530	1400 1032
100 ... 200	S2 type	15.7	400	4.92 ... 17.72	125 ... 450	1400 1040
400 ... 600	S3 type	7.9	200	8.70 ... 13.50	221 ... 343	1401 1520
400 ... 600	S3 type	12.6	320	8.70 ... 18.23	221 ... 463	1401 1532
400 ... 600	S3 type	15.7	400	11.61 ... 29.72	295 ... 755	1401 1540
800 ... 1200	S4 type	7.9	200	8.70 ... 13.50	221 ... 343	1401 1520
800 ... 1200	S4 type	12.6	320	8.70 ... 18.23	221 ... 463	1401 1532
800 ... 1200	S4 type	15.7	400	11.61 ... 29.72	295 ... 755	1401 1540
800 ... 1200	V1	12.6	320			4199 3018
800 ... 1200	V1	15.7	400			4199 3019

Bridging bars

accses_205_a_1_cat



Use

Creation of a common point, above or below the switch, between positions I and II.

Rating (A)	No. bridging bar	Reference
100 ... 200	3	4159 3021
100 ... 200	4	4159 4021
400	3	4159 3041
400	4	4159 4041
600	3	4159 3063
600	4	4159 4063
800 ... 1200	3	4159 3080
800 ... 1200	4	4159 4080

Terminal protection screen

accses_207_a_1_cat



Use

Top or bottom protection against direct contact with terminals or connecting parts.

Rating (A)	No. of poles	Reference
100 ... 200	3 P	4158 3021
100 ... 200	4 P	4158 4021
400	3 P	4158 3041
400	4 P	4158 4041
600	6 P	1609 3063
600	4 P	1609 4063
800 ... 1200	3 P	1609 3080
800 ... 1200	4 P	1609 4080

Auxiliary contacts

accses_005_a_1_cat



Use

Pre-break and signalisation of positions .
 For low level ACs and other ACs contact us.

Electrical characteristics

A300.

NO/NC auxiliary contact

Rating (A)	Contact (s)	Reference
100 ... 400	NO/NC on position 1 and 2	4159 0021
100 ... 400	Low level NO/NC on position 1 and 2	4159 0121
600 ... 1200	NO/NC on position 1 and 2	as Standard

Terminal lugs

Use

Connection of bare copper cables onto the terminals (without lugs).

dl_002_3



Rating (A)	Wires range	No wires per lug	Lugs per kit	Wires	Reference
100 ... 200	6 - 300MCM	1	2	Cu / Al	3954 2020
100 ... 200	6 - 300MCM	1	3	Cu / Al	3954 3020
100 ... 200	6 - 300MCM	1	4	Cu / Al	3954 4020
400	4 - 600MCM	1	2	Cu / Al	3954 2040
400	4 - 600MCM	1	3	Cu / Al	3954 3040
400	4 - 600MCM	1	4	Cu / Al	3954 4040
400	2x (#6 - 350MCM)	2	2	Cu / Al	3954 2041
400	2x (#6 - 350MCM)	2	3	Cu / Al	3954 3041
400	2x (#6 - 350MCM)	2	4	Cu / Al	3954 4041
600	2x (#2 - 600MCM)	1	2	Cu / Al	3954 2060
600	2x (#2 - 600MCM)	2	3	Cu / Al	3954 3060
600	2x (#2 - 600MCM)	2	4	Cu / Al	3954 4060

➔ SIRCOVER UL - Characteristics according to UL1008

100 to 1200 A

General use rating (A)	100 A	200 A	400 A	600 A	800 A	1200 A
Operation voltage	600	600	600	600	600	600
Short circuit rating at 600 VAC (kA)	100	100	65	100	100	100
Type of fuse	J	J	J	L	L	L
Max. fuse rating (A)	200	400	600	800	1000	1600
Short circuit rating with circuit breaker (kA/ms)	10 / 25	10 / 25	14 / 50	35 / 50	35 / 50	35 / 50

Operational power / current max Operational 3 ph

240 VAC Total System (A)	100	100	250	400	700	700
240 VAC Resistive load (A)	100	200	400	600	800	1200
480 VAC Total System (A)	100	100	125	350	600	600
480 VAC Resistive load (A)	100	200	400	600	800	1200
600 VAC Resistive load (A)	100	200	400	400	800	1200

Mechanical endurance

Endurance (number of operating cycles)	6050	6050	6050	6050	3550	3550
----------------------------------------	------	------	------	------	------	------

Connection terminals

Min. connection section / AWG	#6	#6	#4 / 2 x #6	2x #2	4x #2	4x #2
Max. connection section / AWG	300MCM	300MCM	600MCM / 2x 350MCM	2x 600MCM	4x 600MCM	4x 600MCM

➔ Characteristics according to UL98/CSA22.2#4

100 to 1200 A

General use rating (A)	100 A ⁽¹⁾	200 A ⁽¹⁾	400A ⁽¹⁾	600 A	800 A	1200 A
Short circuit rating at 600 VAC (kA)	200	200	200	200	100	100
Type of fuse	J	J	J	J	L	L
Max. fuse rating (A)	100	200	400	600	800	1200

Max. motor, hp / FLA 3 ph motor max.

220-240 VAC	30 / 80	75 / 196	125 / 312	200 / 480	200 / 480	200 / 480
440-480 VAC	60 / 77	125 / 156	250 / 302	400 / 477	500 / 590	500 / 590
600 VAC	100 / 99	200 / 192	350 / 336	350 / 336	500 / 472	500 / 472

Max. motor power, hp / DC FLA motor max.

125 VDC ⁽¹⁾	10 / 76	15 / 112	20 / 148	20 / 148		
250 VDC ⁽²⁾	15 / 55	15 / 55	50 / 173	50 / 173		

Mechanical characteristics

Endurance (number of operating cycles)	10000	8000	6000	6000	3500	3500
Operating torque (lbs.in/Nm)	88.5/10	88.5/10	128.3/14.5	327.5/37	442.5/50	442.5/50

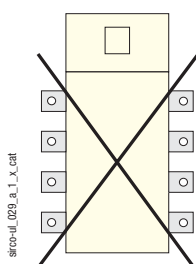
Auxiliary contacts

Electrical characteristics	A300	A300	A300	A300	A300	A300
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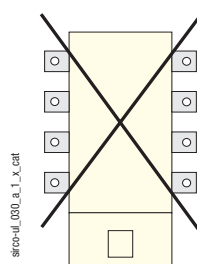
(1) Only UL98 listed, availability see our Website.

➔ Mounting orientation

SIRCOVER - 100 to 400 A

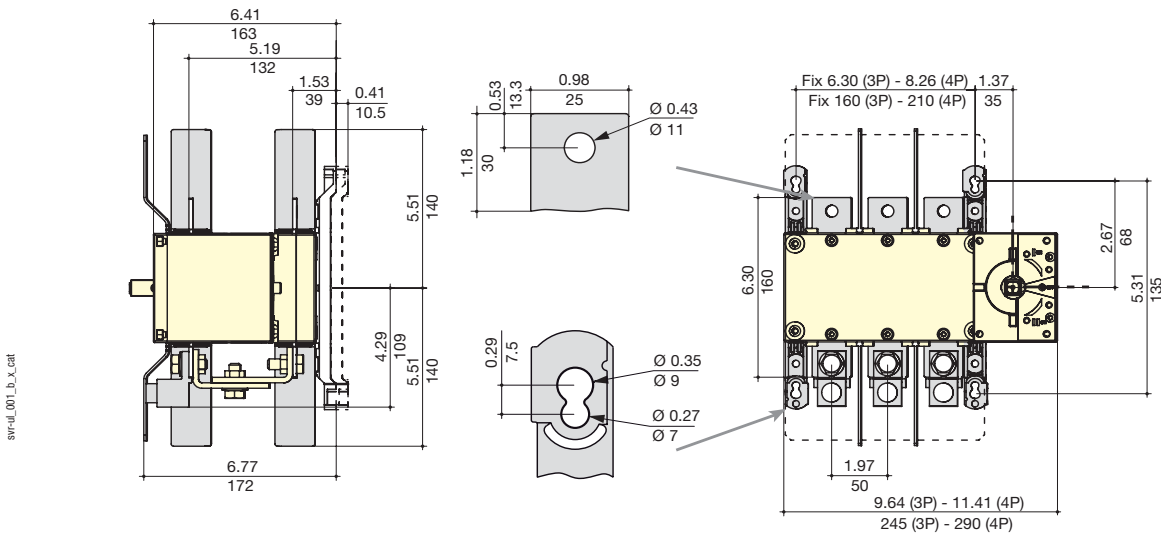


SIRCOVER - 600 to 1200 A

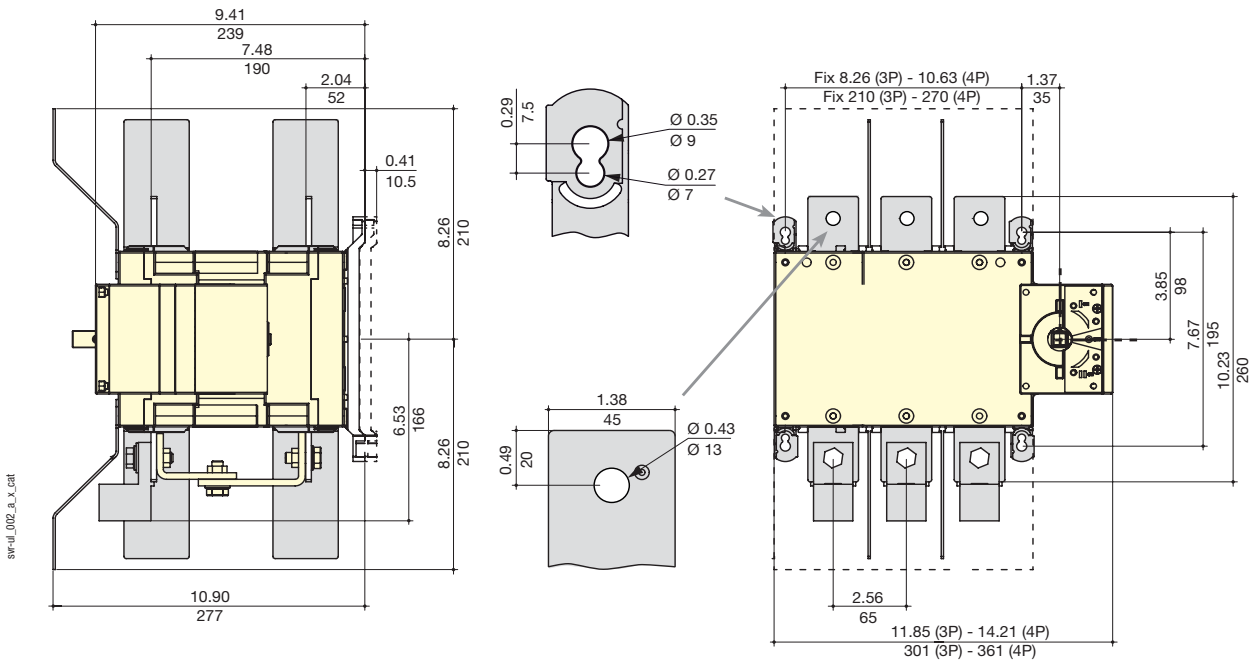


➔ Dimensions (in / mm)

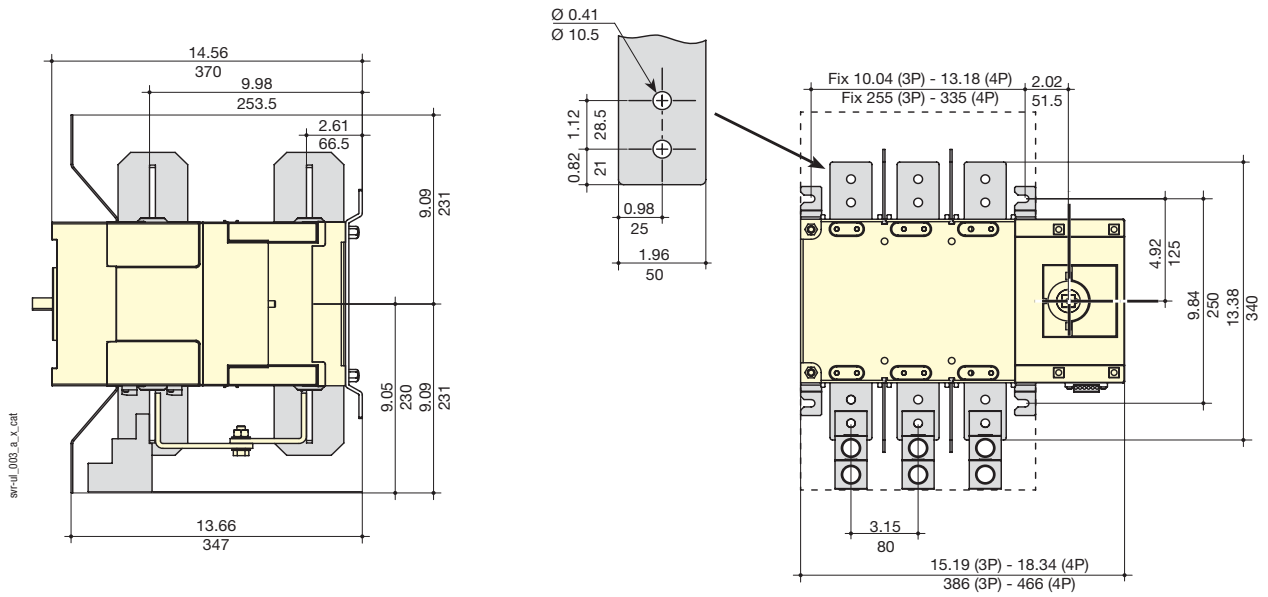
100 to 200 A



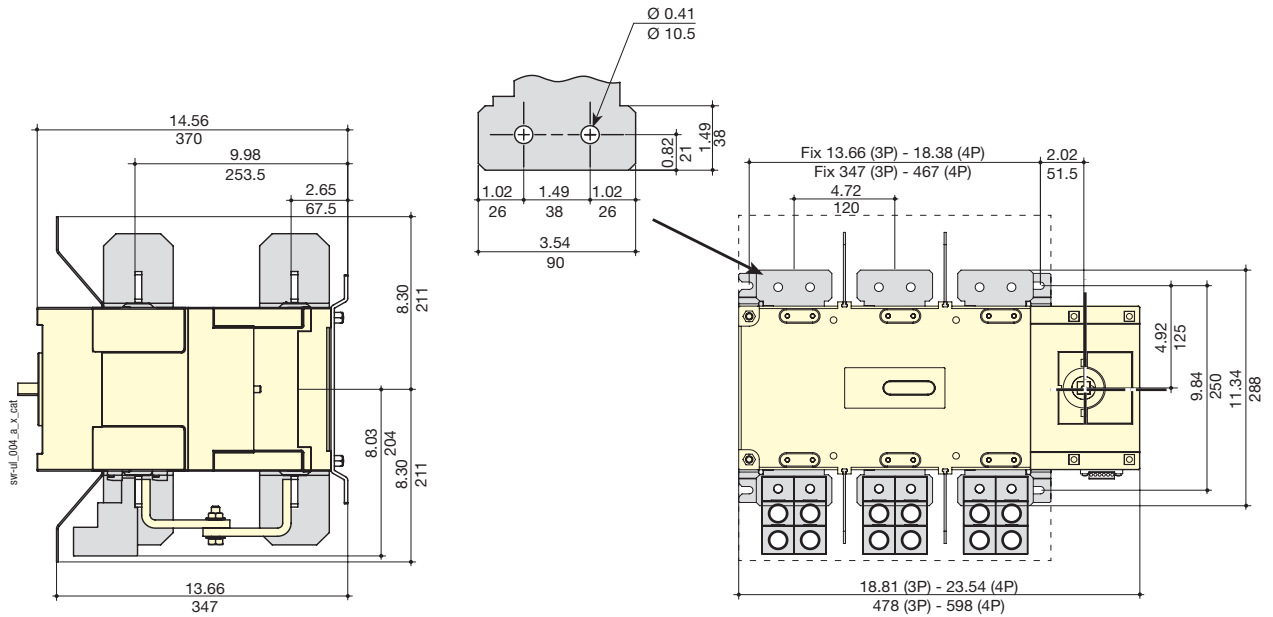
400 A



600 A

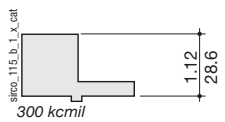
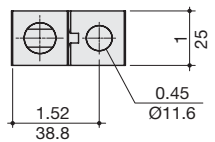


800 to 1200 A

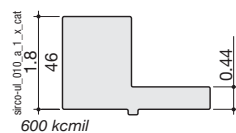
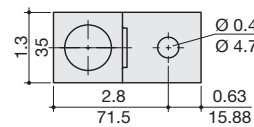


➔ Terminal lugs (in / mm)

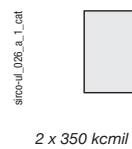
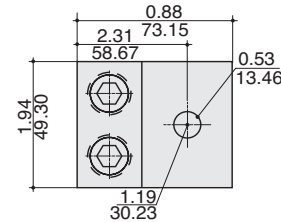
SIRCOVER 100 to 200 A



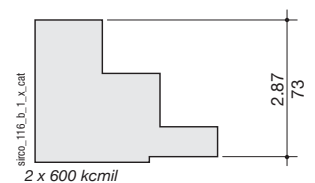
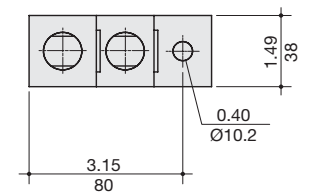
SIRCOVER 400 A



SIRCOVER 400 A

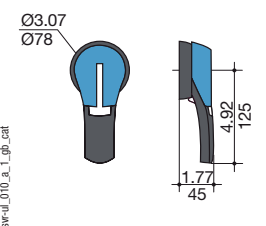
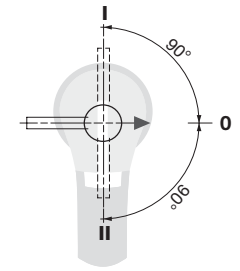
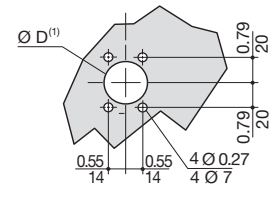


SIRCOVER 600 to 1200 A

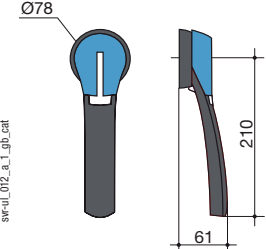
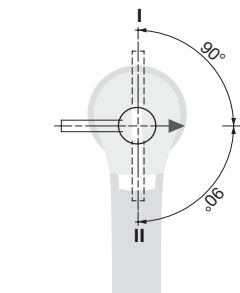
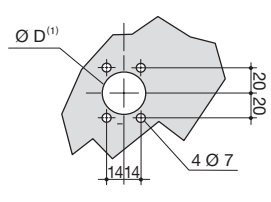


➔ External handles dimensions (in / mm)

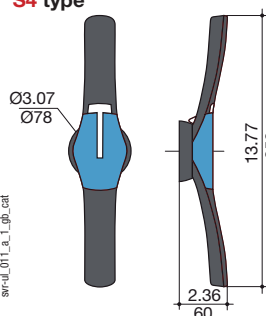
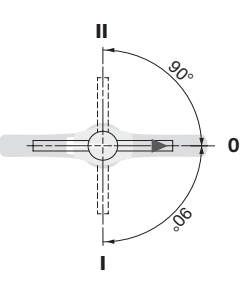
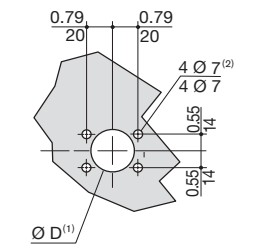
SIRCOVER 100 and 200 A

Handle type	Front operation Direction of operation	Door drilling
<p>S2 type</p>  <p>svr-ul_010_a_1_gp_cat</p>		

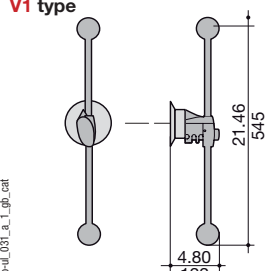
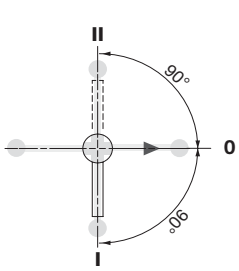
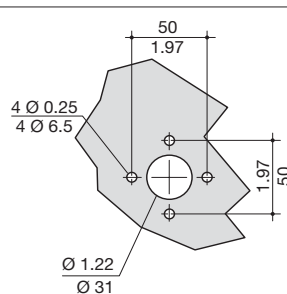
SIRCOVER 400A

Handle type	Front operation Direction of operation	Door drilling
<p>S3 type</p>  <p>svr-ul_012_a_1_gp_cat</p>		

SIRCOVER 600 to 1200 A

Handle type	Front operation Direction of operation	Door drilling
<p>S4 type</p>  <p>svr-ul_011_a_1_gp_cat</p>		

SIRCOVER 600 A - 6/8 poles

Handle type	Front operation Direction of operation	Door drilling
<p>V1 type</p>  <p>svr-ul_031_a_1_gp_cat</p>		



From 40 to 160 A

➤ Function

The **ATyS M**, dedicated to applications below 160A, enables the switching On Load of single or three phase sources in remote or automatic mode.

This Transfer Switching Equipment (TSE) is designed to be used in low voltage power systems for Open Transition Transfer applications.

This Transfer Switching Equipment (TSE) is composed of two mechanically and electrically interlocked switches.

- The **ATyS M 3** (RTSE) is driven by volt-free dry contacts allowing switching operation between position I, 0, II, from an external control logic or a PLC (control relay type ATyS C30).
- The **ATyS M 6** (ATSE) is dedicated to break before make automatic transfer applications. The ATyS M 6 integrates control relays, timers and test functions to manage a Normal/Backup switching operation between two networks or between a generator set and a network.

➤ General characteristics

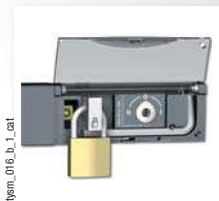
- Isolation with positive break indication.
- On load switching.
- Manual emergency operation.
- 3 stable positions.(I, 0, II).
- Padlocking in 0 or in all three positions (I, 0, II).
- AUTO / MANU selector.
- Command of the device in 0 position thanks to the energy storage device (ATyS M 6e).
- Single phase or three phase control on networks I and II (ATyS M 6s and M 6e).
- Electrical measurements (ATyS M 6e).

➤ Conformity to standards

- IEC 60947-3
- IS 14947-3
- EN 60947-3
- NBN EN 60947-3
- BS EN 60947-3
- GB 14048
- IEC 60947-6-1
- EN 60947-6-1
- NBN EN 60947-6-1
- BS EN 60947-6-1
- VDE 0660-107



Emergency manual operation



Padlocking facility



AUT/ MAN sealable cover

➤ What you need to know

• On ATyS M 3s model

Power supply

Single-phase interface

Three-phase interface



ATyS M 3s is equipped with two independent 230 VAC (176-288 VAC), 50/60 Hz (45/65-65 Hz) power inputs.

These two supplies can be connected individually to switch I and switch II:

- Power supply I must be available to reach position I,
- Power supply II must be available to reach position II.

The 0 position is a stable transition position.

The use of a double power supply module (DPS) or an external supply enables the full security of the 3 position commands in all circumstances (from the available source). In this case, both supply inputs of the ATyS M 3s must be connected in parallel in order for them both to be supplied from the output of the DPS.

Electrical control

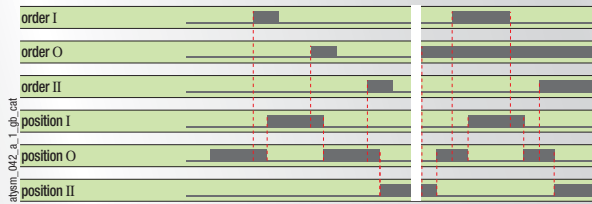
The switching operation can be driven by an external volt free contact coming from an external control relay (ATyS C30 for example). The positions are stable in case of loss of supply. There are two types of command logic to choose from: impulse or contactor.

• Impulse logic

- A switching command of at least 60 ms is necessary to initiate operation.
- Orders I and II have priority over order 0.
- Order 0 must be maintained (joint connection 317).

• Contactor logic

- If command I or II disappears, the device returns to zero position, if power supply is available.
- The first command (order) received (I or II) has priority as long as it remains present.



• On ATyS M 6s and 6e models

Power supply

ATyS M 6 products are self power supplied from incoming supplies: 230 VAC (176-288 VAC for the ATyS M 6s and 160-305 VAC for the ATyS M 6e), 50/60 Hz (45-65 Hz).

For three phase products: two different versions are available:

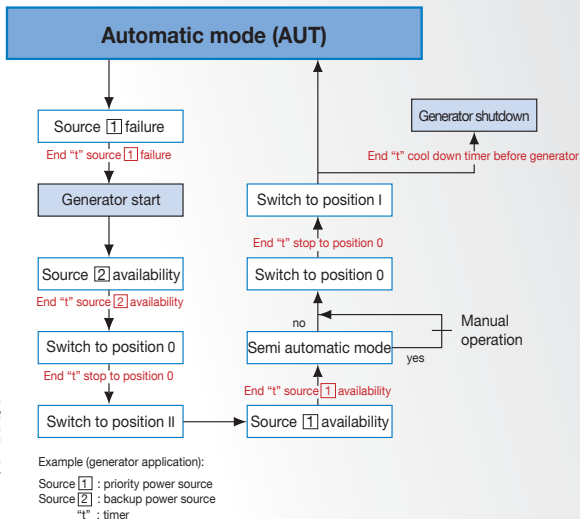
- 230 / 400 VAC with neutral conductor distributed: product is power supplied between phase and neutral,
- 127 / 230 VAC with or without neutral conductor distributed: product is power supplied between 2 phases.

For single phase products: one version is available:

- 230 VAC networks: product is power supplied between phase and neutral, The neutral conductor can be connected to the left or right side of the switch.

Automatic control

The ATyS M 6e and M 6s are equipped with a sequence logic.



Configuration

ATyS M 6s

Single-phase interface

Three phase interface



Common points between the three-phase and single-phase versions:

- 2 potentiometers (Sector loss and return time delays)
- 2 dip-switches (Pause for 2 seconds in position 0 during the transitions I->II ; Network-Network Application or Network-Genset).
- 4 LED's (Supplies status; Automatic mode; Fault)
- 3 inputs for external control (Inhibition of the automatic mode; Remote Test on load; Manual retransfer from standby supply to normal supply).
- 1 NO bi-stable output relay for generator start /stop command (30 VDC / 2 A).
- 1 NC relay for product availability (250 VAC / 0.5 A).

Three phase ATyS M specificities:

- 2 potentiometers (Nominal voltage; Voltage thresholds)
- 2 dip switches (50 or 60 Hz; Network)

Specificity of the single phase ATyS M:

- PRG button: automatic voltage and nominal frequency programming.

ATyS M 6e

Three phase interface



- 4 applications: Network/Genset, Network/Network, With or without priority.
- Adjustable thresholds and hysteresis.
- Display + keyboard (Programming of the values; Visualization of the electrical readings; Test and control positions function; Visualization of the availability of supplies).
- LED's (Product Power On; Supplies status; Position of the switch status; Automatic mode TEST/CONTROL Mode; Fault)
- 3 configurable inputs for external control (Automatic mode inhibition; Test on load and off load; Manual retransfer; Electrical control of the switch in positions I, 0 or II; Change of priority network...).
- 3 NO output relays (250 VAC / 3 A) , configurable (Availability of the supplies; Auxiliary position contacts; Load shedding control; Operational product...)
- 1 configurable bi-stable output relay for generator start /stop command (30 VDC / 2 A).
- Connection of a remote interface ATyS D10 or D20.
- A version with RS485 Communication, JBUS/Modbus protocol, is available.

➤ References



ATyS M 3s

Rating (A)	No. of poles	Power-supply voltage	ATyS M 3s	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contacts unit
40 A	2 P	230 VAC	1323 2004	2 P 1309 2006 4 P 1309 4006	2 pieces 1399 4006	2 pieces 2294 4016⁽¹⁾	1 st unit as standard 2 nd unit 1309 0001⁽²⁾
	4 P	230 VAC	1323 4004				
63 A	2 P	230 VAC	1323 2006				
	4 P	230 VAC	1323 4006				
80A	2 P	230 VAC	1323 2008				
	4 P	230 VAC	1323 4008				
100 A	2 P	230 VAC	1323 2010				
	4 P	230 VAC	1323 4010				
125 A	2 P	230 VAC	1323 2012				
	4 P	230 VAC	1323 4012				
160 A	2 P	230 VAC	1323 2016	1309 2016			
	4 P	230 VAC	1323 4016	1309 4016			

(1) In the three-phase version, in order to ensure complete upstream and downstream protection, order the reference twice, for the single-phase version, order the reference once.

(2) 1 contact block for I, 0 and II positions.



ATyS M 6s

Rating (A)	No. of poles	Network (VAC)	ATyS M 6s	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contacts unit	Sealable cover
40 A	2 P	230	1353 2004	2 P 1309 2006 4 P 1309 4006	2 pieces 1399 4006	2 pieces 2294 4016⁽¹⁾	1 piece 1309 0001⁽²⁾	2 P 1359 2000 4 P 1359 0000
	4 P	127/230	1353 4004					
	4 P	230/400	1354 4004					
63 A	2 P	230	1353 2006					
	4 P	127 / 230	1353 4006					
	4 P	230 / 400	1354 4006					
80 A	2 P	230	1353 2008					
	4 P	127 / 230	1353 4008					
	4 P	230 / 400	1354 4008					
100 A	2 P	230	1353 2010					
	4 P	127 / 230	1353 4010					
	4 P	230 / 400	1354 4010					
125 A	2 P	230	1353 2012					
	4 P	127 / 230	1353 4012					
	4 P	230 / 400	1354 4012					
160 A	2 P	230	1353 2016	2 P 1309 2016 4 P 1309 4016	2 pieces 1399 4006	2 pieces 2294 4016⁽¹⁾	1 piece 1309 0001⁽²⁾	2 P 1359 2000 4 P 1359 0000
	4 P	127 / 230	1353 4016					
	4 P	230 / 400	1354 4016					

(1) In the three-phase version, in order to ensure complete upstream and downstream protection, order the reference twice.

(2) 1 contact block for I, 0 and II positions.

atysm_007_a_2_cat



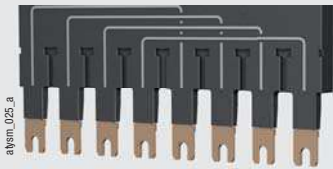
ATyS M 6e

Rating (A)	No. of poles	Network (VAC)	ATyS M 6e	ATyS M 6e + COM	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contacts unit	Remote Human/Machine Interface
40 A	4 P	127 / 230	1363 4004	1383 4004	4 P 1309 4006	2 pieces 1399 4006	2 pieces 2294 4016 ⁽¹⁾	1 piece 1309 0001 ⁽²⁾	ATyS D10 1599 2010 ATyS D20 1599 2020
	4 P	230 / 400	1364 4004	1384 4004					
63 A	4 P	127 / 230	1363 4006	1383 4006					
	4 P	230 / 400	1364 4006	1384 4006					
80 A	4 P	127 / 230	1363 4008	1383 4008					
	4 P	230 / 400	1364 4008	1384 4008					
100 A	4 P	127 / 230	1363 4010	1383 4010					
	4 P	230 / 400	1364 4010	1384 4010					
125 A	4 P	127 / 230	1363 4012	1383 4012					
	4 P	230 / 400	1364 4012	1384 4012					
160 A	4 P	127 / 230	1363 4016	1383 4016	4 P				
	4 P	230 / 400	1364 4016	1384 4016	1309 4016				

(1) In order to ensure complete upstream and downstream protection, order the reference twice.
(2) 1 contact block for I, 0 and II positions.

Accessories

Bridging bars



atysm_025_a

Use

To provide common point on either incoming or outgoing terminals.

Rating (A)	No. of poles	Reference
40 ... 125	2 P	1309 2006
160	2 P	1309 2016
40 ... 125	4 P	1309 4006
160	4 P	1309 4016

Voltage sensing and power supply tap



atysm_025_a

Use

To allow connection of $2 \times \leq 1.5 \text{ mm}^2$ voltage sensing or power cables. The voltage sensing tap can be mounted in all the terminals without reducing their connecting capacity.

Rating (A)	Lot de	Reference
40 ... 160	2 pieces	1399 4006

Terminal shrouds



atysm_027_a

Use

To have a full protection against direct contact with the connection terminals or parts.

Terminal shrouds advantages

Perforations enabling remote thermographic verification without dismantling.
Possibility of sealing.

Mounting

In three-phase version, for upstream and downstream protection, order the reference twice, in single phase version order the reference just once.

Rating (A)	Position	Reference
40 ... 160	Top and bottom	2294 4016 ⁽¹⁾

(1) Reference made of 2 pieces.

Auxiliary contact



atysm_028_a_1_cat

Use

Up to 2 auxiliary contacts accessory per product.
Each accessory integrates 1 NOC auxiliary contact (for each position I, 0 and II).
The ATyS M 3s is delivered in standard with 1 unit.

Characteristics

250 VAC / 5 A maximum.

Rating (A)	Reference
40 ... 160	1309 0001

Sealable cover



Use

Prevents access to the configuration panel of the ATyS M 6s.

Rating (A)	No. of poles	Reference
40 ... 160	2 P	1359 2000
40 ... 160	4 P	1359 0000

Residential enclosure



Use

Dedicated to the implementation of a single phase ATyS M, it enables easy access to an IP41 compact supply switching solution.

Rating (A)	H x W x D (mm)	Reference
40 ... 160	410 x 305 x 150	1309 9056

Auto transformer

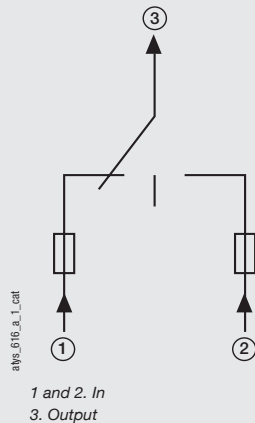
Use

The 400/230 Vac 400 VA auto transformer is used with the ATyS M 6 in case of three-phase network without neutral.

To use it with the ATyS M 6e version 230/400 Vac, the position of the neutral (right or left) and the product network type (3NBL) have to be configured in the programming mode.

Rating (A)	Reference
40 ... 160	4359 4315

Double power supply - DPS



Use

Allows an ATyS M 3s to be supplied by two 230 VAC 50/60Hz networks.

Input

- The input is considered as "active" from 200 VAC.
- Maximum voltage: 288 VAC.
- Internal protection: fuse protected 3.15 A
- Terminal connections: max. 6 mm².
- Modular device: 4 modules width.

Input 1	Input 2	Output
230 VAC	0 VAC	230 VAC (Input 1)
0 VAC	230 VAC	230 VAC (Input 2)
230 VAC	230 VAC	230 VAC (Input 1)
0 VAC	0 VAC	0 VAC

Description of accessories	Reference
DPS	1599 4001

Connecting cable for remote interfaces



Use

To connect between a remote interface (D10 or D20) and a control product (ATyS M 6e).

Characteristics: RJ45 8 straight non insulated cables, 3 m length.

Type	Length	Reference
RJ45 cable	3 m	1599 2009

Power connection terminals

Use

The power connection terminals allow conversion of the ATyS M cage terminals into bolt-on type connection terminals, allowing the connection of up to two 70mm² cables.

Each power connection terminal is provided with separation screens.

Rating (A)	Reference
40 ... 160	1399 4017

Remote interfaces for ATyS M 6e



atys_561.c.1_cat

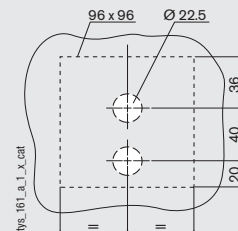


atys_565.c.1_cat



atys_567.a.1_cat

Interfaces are self powered from the ATyS M 6e



Drillings

Use

To display source availability and changeover state on the front of a panel. Interfaces are self powered from the ATyS M 6e. Maximum connection distance of 3 m.

ATyS D10

To display source availability and changeover state on the cabinet front panel. Protection degree: IP21

ATyS D20

In addition to the ATyS D10, it allows displays, operation; tests and configuration on the cabinet front panel. Protection degree: IP21

Door mounting

2 holes Ø 22.5. ATyS connection via RJ45 cable, not isolated.

Cable not provided

Description of accessories

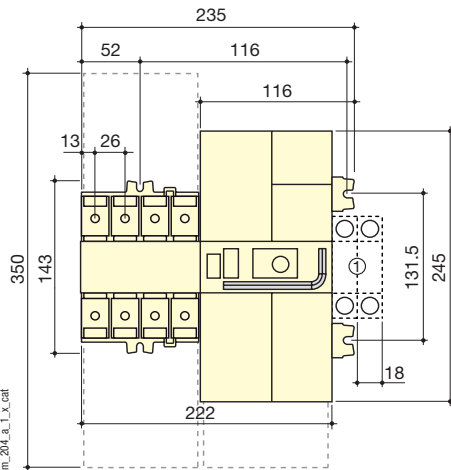
Reference

ATyS D10	1599 2010
ATyS D20	1599 2020

Dimensions

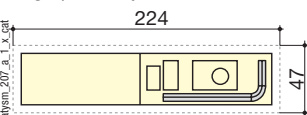
ATyS M 40 to 160 A

Single phase ATyS M

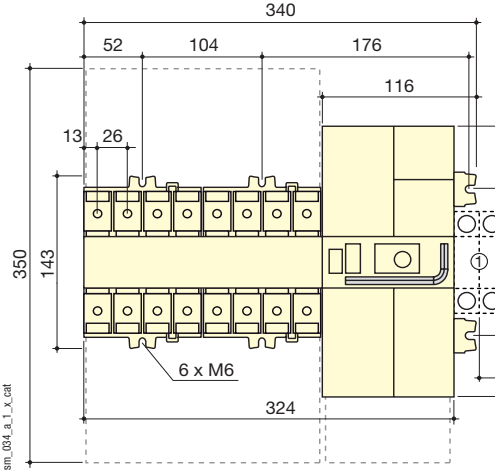


1. Auxiliary contact (2 max).

Single phase ATyS M - Door cutout

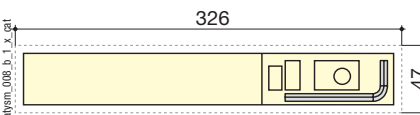


Three-phases ATyS M



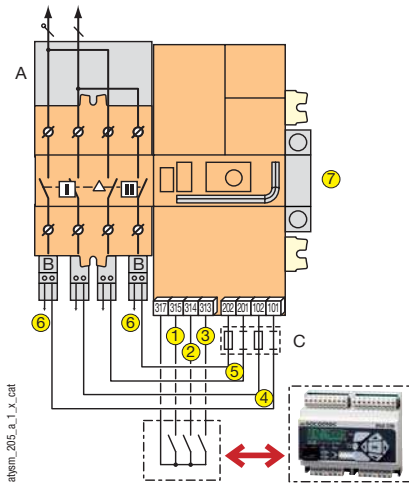
1. Auxiliary contact (2 max).

Three-phases ATyS M - Door cutout

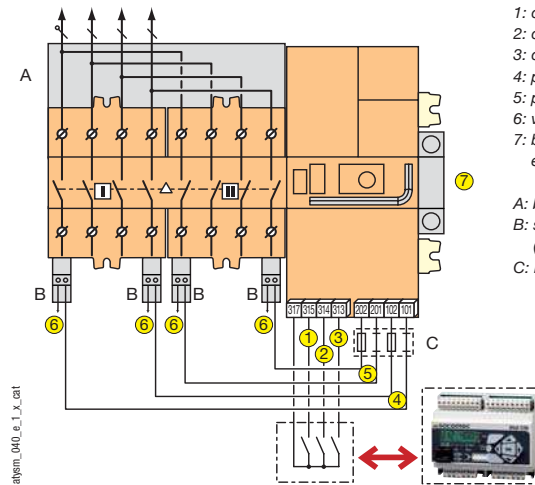


➤ Terminals and connections

Single phase ATyS M 3s



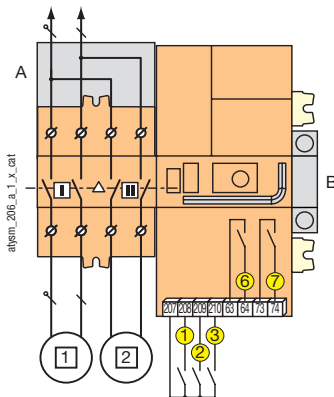
Three-phases ATyS M 3s



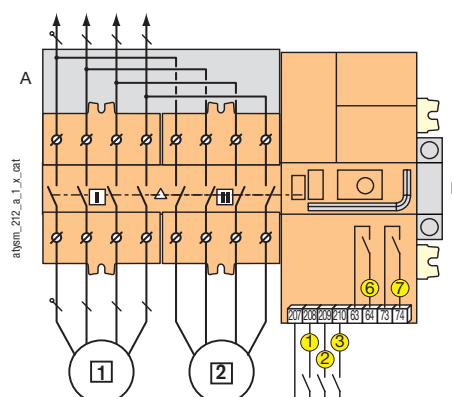
- 1: control position I
- 2: control position II
- 3: control position 0 / C
- 4: power supply I (230 VAC)
- 5: power supply II (230 VAC)
- 6: voltage tap
- 7: block auxiliary contacts - 1 NO/NC each position I, 0, II (factory fitted)

A: bridging bar (accessories)
 B: single phase voltage sensing tap (accessories)
 C: F1 / F2 = fuse 10 A gG

Single phase ATyS M 6s



Three-phases ATyS M 6s

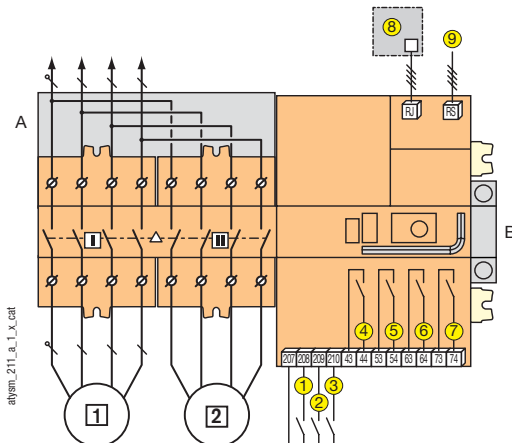


- 1 preferred source
- 2 alternate source

- 1: manual retransfer / priority change
- 2: charge test
- 3: automatic mode inhibition
- 6: relay for product availability
- 7: genset start / stop relay generating set

A: bridging bar (accessories)
 B: block auxiliary contacts - 1 NO/NC each position I, 0, II (factory fitted)

Three-phases ATyS M 6s



- 1 preferred source
- 2 alternate source

- 1: manual retransfer / priority change
- 2: charge test
- 3: automatic mode inhibition
- 6: relay for product availability
- 7: genset start / stop relay generating set

A: bridging bar (accessories)
 B: auxiliary contacts unit - 1 AC per position I, 0, II (accessory)

⇒ Characteristics according to IEC 60947-3 and IEC 60947-6-1

40 to 160 A

Thermal current I_{th} (40°C)	40 A	63 A	80 A	100 A	125 A	160 A
Rated insulation voltage U_i (V) (power circuit)	800	800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV) (power circuit)	6	6	6	6	6	6
Rated insulation voltage U_i (V) (operation circuit)	300	300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (operation circuit)	4	4	4	4	4	4

Rated operational currents I_o (A) (IEC 60947-3)

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-22 A / AC-22 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-23 A / AC-23 B	40/40	63/63	80/80	100/100	125/125	125/160
690 VAC	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
690 VAC	AC-22 A / AC-22 B	40/40	63/63	80/80	80/80	100/125	100/125
690 VAC	AC-23 A / AC-23 B	40/40	63/63	63/63	80/80	80/80	80/80

Rated operational currents I_o (A) (IEC 60947-6)-1

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-31 A / AC-31 B	40/40	63/63	80/80	100/100	100/125	100/160
415 VAC	AC-32 A / AC-32 B	40/40	63/63	80/80	100/100	100/125	100/160
415 VAC	AC-33 A / AC-33 B	-/40	-/63	-/80	-/80	-/80	-/80

Overload capacity

Rated short-time withstand current 1 s. I_{cw} (kA rms)	4	4	4	4	4	4
Rated short-circuit making capacity I_{cm} (kA peak) ⁽²⁾	17	17	17	17	17	17
Prospective short-circuit current (kA rms) ⁽²⁾	50	50	50	50	50	50
Rating of the associated fuse (A) ⁽²⁾	40	63	80	100	125	160

Connection

Minimum connection section	6	6	6	6	6	6
Maximum Cu cable section (mm ²)	70	70	70	70	70	70
Tightening torque (Nm)	5	5	5	5	5	5

Switching time (Standard setting)

I - 0 or II - 0 (ms) ⁽³⁾	50	50	50	50	50	50
I - II or II - I (ms) ⁽³⁾	180	180	180	180	180	180
Duration of "electrical blackout" I - II (ms) minimum (ATyS M 3s)	60	60	60	60	60	60
Duration of "electrical blackout" I - II (ms) minimum (ATyS M 6s or 6e)	90	90	90	90	90	90

Power supply

Supply 230 VAC mini / maxi (VAC) (ATyS M 3s and ATyS M 6s)	176/288	176/288	176/288	176/288	176/288	176/288
Supply 230 VAC mini / maxi (VAC) (ATyS M 6e)	160/305	160/305	160/305	160/305	160/305	160/305

Control supply power demand

Nominal power (VA)	6	6	6	6	6	6
Max current under 230 VAC (A) - ATyS M 3s and M 6s	30	30	30	30	30	30
Max current under 230 VAC (A) - ATyS M 6e	20	20	20	20	20	20

Mechanical characteristics

Endurance (number of operating cycles)	10 000	10 000	10 000	10 000	10 000	10 000
Weight (kg)	3.5	3.5	3.5	3.5	3.5	3.5

(1) A/B: Category with index A = frequent operation - Category with index B = infrequent operation.

(2) For a rated operating voltage $U_o = 400$ VAC.

(3) Between the order given and reaching of position at U_o (under nominal conditions).

⇒ Services & Technical Assistance

Our expertise extends to a complete offer of services like commissioning installation audit, training, maintenance and project engineering.





From 125 to 3200 A

➤ Function

The **ATyS** dedicated to applications from 125A, enables the switching On Load three phase sources in remote or automatic mode. This Transfer Switching Equipment (TSE) is designed to be used in low voltage power systems for Open Transition Transfer applications.

This Transfer Switching Equipment (TSE) is composed of two mechanically and electrically interlocked switches.

- The **ATyS 3 (RTSE)** is driven by volt-free dry contacts allowing switching operation between position I, 0, II, from an external control logic or a PLC (control relays type ATyS C30).
- The **ATyS 6 (ATSE)** is dedicated to break before make automatic transfer applications. The ATyS 6 integrates control relays, timers and test functions to manage a Normal/ Backup switching operation between two networks or between a generator set and a network.

➤ General characteristics

- Fully visible breaking.
- On load switching.
- Manual emergency operation.
- 3 stable positions (I, 0, II), overlapping contacts on request (I, I+II, II).
- Padlocking in 0 position (I and II optional).
- AUTO / MANU selector.
- Single phase or three phase control on networks I and II (ATyS 6e and 6m).
- Electrical measurements (ATyS 6e and 6m).
- Measure of I, P, Q, S and PF (ATyS 6m).
- Configurable Control Logic.
- Possibility of inhibition of the electrical control (ATyS 3e).
- Optional communication and inputs/outputs modules (ATyS 3e and ATyS 6).

➤ Conformity to standards

- IEC 60947-3
- IS 14947-3
- EN 60947-3
- NBN EN 60947-3
- BS EN 60947-3
- GB 14048
- IEC 60947-6-1
- EN 60947-6-1
- NBN EN 60947-6-1
- BS EN 60947-6-1
- VDE 0660-107



atys_007_b_1_cat

AUT/MAN command



atys_013_a_1_cat

Emergency manual operation



atys_008_a_1_cat

Padlocking facility

What you need to know

On ATyS 3s and 3e models

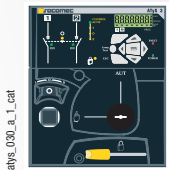
Operation

ATyS 3s



ATyS M 3s is equipped with one 230VAC power input (176-288 VAC), 50/60 Hz (45/65 Hz).

ATyS 3e



ATyS 3e is equipped with 2 power inputs: one for power source 1 & the other one as backup power source 2. It allows the product to be electrically controlled in the 3 positions with only one of the supplies present.

Electrical control

General

- The switching operation can be driven by an external dry contact.
- On ATyS 3e, it is possible to inhibit the electrical control (dry contact closed between terminal n° 313 and 317).

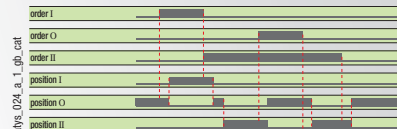
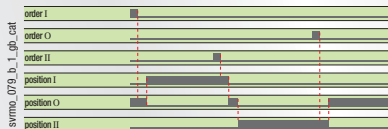
- The first order received has priority as long as it is present. A zero command has always priority, excepted in case of controls inhibition.

Pulse logic

- The switching command is a pulsed dry contact (100ms minimum).
- When the order disappears, the product remains in position. The impulse can be of infinite duration without causing any disturbance.

Contactor logic

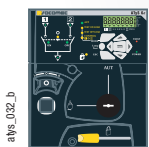
- The transfer command is a maintained dry contact.
- If command I or II disappears, the device returns to zero position, if power supply is available.
- A 0 command drives the device into zero position, irrespective of the status of the I and II commands.



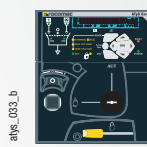
On ATyS 6e and 6m models

Operation

ATyS 6e



ATyS 6m



ATyS 6e and 6m are equipped with 2 power inputs (same as ATyS 3e): one for power source 1 & the other one as backup power source 2. It allows the product to be electrically controlled in the 3 positions with only one of the supplies present.

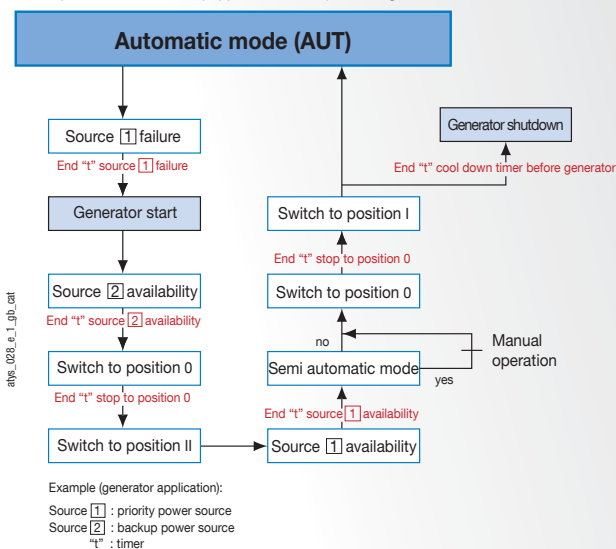
Characteristics

- Single phase or three phase control on networks I and II.
- Independent adjustable over/undervoltage and over/underfrequency thresholds: +/- 20% of the nominal value.
- Adjustable hysteresis thresholds linked to the threshold values.
- Control of phase rotation
- Measure (3U and frequency on network 1 and 2; ATyS 6e and 6m N/E cycle delay; 3I, In, P, Q, S, PF - 3 phases only on ATyS 6m).

- Display + keyboard (adjustment of all threshold parameters; adjustment of MFT, DTT, OMF, MRT, OMR and CDT Visualization of electrical values; Test functions and position control functions;
- LED's (Product Power On; Status of the electrical sources; Position of the switch status; "AUT" mode; TEST/CONTROL mode and default.
- 1 configurable bistable output relay for generator start/stop command.(30 VDC, 5 A, AC1).
- 1NO fault relay activated in case of changeover position ordered and not reached (30 VDC, 5 A, AC1).

Automatic Control

The ATyS 6e and 6m are equipped with a sequence logic.



Control modes

- Test On Load: This test simulates a loss of priority source. The complete automatic sequence is then followed. Can be activated from the keypad of the product or remotely from an external dry contact.
- Test Off-Load: This test will start and stop the generator without load transfer. Can be activated from the keypad of the product.
- Control of position I, 0, II: Allows the selection of the position of the product; the Automatic mode is inhibited. Can be activated from the keypad of the product or remotely from an external dry contact.
- Manual retransfer (Semi automatic): When this parameter is programmed, the switching back to the main must be acknowledge on the keypad of the product or through the contact of an optional Input/output module.

➔ ATyS - References



ATyS 3

Rating (A)	No. of poles	ATyS 3s	ATyS 3e	Bridging bars*	Terminal shrouds	Terminal screens	Optional modules	Auxiliary contacts	Voltage transformer 400/230 VAC		
125 A	3 P	1523 3012	1533 3012	4109 0019	3 P 2694 3014 ⁽³⁾⁽⁴⁾	3 P 1509 3012 ⁽⁵⁾	RS485 MODBUS 1599 2000 ⁽⁶⁾ 2 inputs / 2 outputs 1599 2001 ⁽⁶⁾	ATyS 3s 1599 1002 ⁽⁷⁾	1599 4063		
	4 P	1523 4012 ⁽¹⁾	1533 4012		4 P 2694 4014 ⁽³⁾⁽⁴⁾	4 P 1509 4012 ⁽⁵⁾					
160 A	3 P	1523 3016	1533 3016		4109 0025	3 P 2694 3021 ⁽³⁾⁽⁴⁾				3 P 1509 3025 ⁽⁵⁾	ATyS 3e 1599 0002 ⁽⁷⁾
	4 P	1523 4016 ⁽¹⁾	1533 4016								
250 A	3 P	1523 3025	1533 3025	4109 0039	4 P 2694 4021 ⁽³⁾⁽⁴⁾	4 P 1509 4025 ⁽⁵⁾					
	4 P	1523 4025 ⁽¹⁾	1533 4025								
400 A	3 P	1523 3040	1533 3040	4109 0063	2694 3051 ⁽³⁾⁽⁴⁾	1509 3063 ⁽⁵⁾					
	4 P	1523 4040 ⁽¹⁾	1533 4040								
630 A	3 P	1523 3063	1533 3063	4109 0080	2694 4051 ⁽³⁾⁽⁴⁾	1509 4063 ⁽⁵⁾					
	4 P	1523 4063 ⁽¹⁾	1533 4063								
800 A	3 P	1523 3080	1533 3080	4109 0120	3 P 1509 3080 ⁽⁵⁾	4 P 1509 4080 ⁽⁵⁾		ATyS 3s 1599 1032 ⁽⁷⁾		1599 4120	
	4 P	1523 4080 ⁽¹⁾	1533 4080								
1000 A	3 P	1523 3100	1533 3100	4109 0160	4 P 1509 4160 ⁽⁵⁾	3 P 1509 3160 ⁽⁵⁾	ATyS 3e 1599 0032 ⁽⁷⁾				
	4 P	1523 4100 ⁽¹⁾	1533 4100								
1250 A	3 P	1523 3120	1533 3120	4109 0160	4 P 1509 4160 ⁽⁵⁾	4 P 1509 4160 ⁽⁵⁾	ATyS 3s 1599 1032 ⁽⁷⁾				
	4 P	1523 4120 ⁽¹⁾	1533 4120								
1600 A	3 P	1523 3160	1533 3160	4109 0160	3 P 1509 3160 ⁽⁵⁾	4 P 1509 4160 ⁽⁵⁾	ATyS 3s 1599 1032 ⁽⁷⁾				
	4 P	1523 4160 ⁽¹⁾	1533 4160								
1800 A	3 P	1523 3180		4109 0160	4 P 1509 4160 ⁽⁵⁾	3 P 1509 3200 ⁽⁵⁾	ATyS 3s 1599 1032 ⁽⁷⁾	1599 4200			
	4 P	1523 4180									
2000 A	3 P		1533 3200	4109 0160	4 P 1509 4200 ⁽⁵⁾	4 P 1509 4200 ⁽⁵⁾	included				
	4 P		1533 4200								
2500 A	3 P		1533 3250	(2)	4 P 1509 4200 ⁽⁵⁾	4 P 1509 4200 ⁽⁵⁾	included				
	4 P		1533 4250								
3200 A	3 P		1533 3320	(2)	4 P 1509 4200 ⁽⁵⁾	4 P 1509 4200 ⁽⁵⁾	included				
	4 P		1533 4320								

* 1 required per pole.

(1) Available enclosed (see pages 503 "Enclosed changeover switches").

(2) See page 317 "Copper bars connection kits".

(3) To shroud front switch top and bottom 2 references required.

(4) To fully shroud front, rear, top and bottom 4 references required.

(5) To shroud the front switch top and bottom, 1 reference is required.

(6) On ATyS 3e only.

(7) Factory fitted.

ATyS 3 (continued)

Rating (A)	No. of poles	ATyS 3s	ATyS 3e	DC power supply	Padlockable handle	Key handle interlocking system	Door protective surround	Mounting spacers	DPS - Dual power supply						
125 A	3 P	1523 3012	1533 3012	12VDC/230 VAC 1599 5012	1599 0003 ⁽²⁾	1509 1006 ⁽²⁾	ATyS 3s 1529 0012 ATyS 3e 1539 0012	1509 0001	1599 4001 ⁽³⁾						
	4 P	1523 4012 ⁽¹⁾	1533 4012												
160 A	3 P	1523 3016	1533 3016												
	4 P	1523 4016 ⁽¹⁾	1533 4016												
250 A	3 P	1523 3025	1533 3025												
	4 P	1523 4025 ⁽¹⁾	1533 4025												
400 A	3 P	1523 3040	1533 3040												
	4 P	1523 4040 ⁽¹⁾	1533 4040												
630 A	3 P	1523 3063	1533 3063							24VDC/230 VAC 1599 5112	1599 0004 ⁽²⁾	1509 1004 ⁽²⁾	ATyS 3s 1529 0080 ATyS 3e 1539 0080		
	4 P	1523 4063 ⁽¹⁾	1533 4063												
800 A	3 P	1523 3080	1533 3080												
	4 P	1523 4080 ⁽¹⁾	1533 4080												
1000 A	3 P	1523 3100	1533 3100												
	4 P	1523 4100 ⁽¹⁾	1533 4100												
1250 A	3 P	1523 3120	1533 3120												
	4 P	1523 4120 ⁽¹⁾	1533 4120												
1600 A	3 P	1523 3160	1533 3160												
	4 P	1523 4160 ⁽¹⁾	1533 4160												
1800 A	3 P	1523 3180													
	4 P	1523 4180													
2000 A	3 P		1533 3200												
	4 P		1533 4200												
2500 A	3 P		1533 3250												
	4 P		1533 4250												
3200 A	3 P		1533 3320												
	4 P		1533 4320												

(1) Available enclosed (see pages 503 "Enclosed changeover switches").

(2) Factory fitted.

(3) On ATyS 3e only.



ATyS 6*

Rating (A)	No. of poles	ATyS 6e	ATyS 6m	Bridging bars**	Voltage sensing kit	Terminal shrouds	Terminal screens	Optional modules	Human interface / Offset Machine	RJ45 connecting cable					
125 A	3 P	1563 3012	1573 3012	4109 0019	3 P 1559 3012 4 P 1559 4013 ⁽³⁾	3 P 2694 3014 ⁽⁴⁾⁽⁵⁾ 4 P 2694 4014 ⁽⁴⁾⁽⁵⁾	3 P 1509 3012 ⁽⁶⁾ 4 P 1509 4012 ⁽⁶⁾	RS485 MODBUS 1599 2000 2 inputs/ 2 outputs 1599 2001	ATyS D10 1599 2010 ATyS D20 1599 2020	1599 2009					
	4 P	1563 4012 ⁽¹⁾	1573 4012												
160 A	3 P	1563 3016	1573 3016												
	4 P	1563 4016 ⁽¹⁾	1573 4016												
250 A	3 P	1563 3025	1573 3025								4109 0025	3 P 1559 3025 4 P 1559 4026 ⁽³⁾	3 P 2694 3021 ⁽⁴⁾⁽⁵⁾ 4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	3 P 1509 3025 ⁽⁶⁾ 4 P 1509 4025 ⁽⁶⁾	
	4 P	1563 4025 ⁽¹⁾	1573 4025												
400 A	3 P	1563 3040	1573 3040	4109 0039	3 P 1559 3040 4 P 1559 4041 ⁽³⁾	3 P 2694 4021 ⁽⁴⁾⁽⁵⁾ 4 P 2694 4021 ⁽⁴⁾⁽⁵⁾	3 P 1509 3025 ⁽⁶⁾ 4 P 1509 4025 ⁽⁶⁾								
	4 P	1563 4040 ⁽¹⁾	1573 4040												
630 A	3 P	1563 3063	1573 3063	4109 0063	3 P 1559 3063 4 P 1559 4064 ⁽³⁾	2694 3051 ⁽⁴⁾⁽⁵⁾	1509 3063 ⁽⁶⁾								
	4 P	1563 4063 ⁽¹⁾	1573 4063			2694 4051 ⁽⁴⁾⁽⁵⁾	1509 4063 ⁽⁶⁾								
800 A	3 P	1563 3080	1573 3080	4109 0080	3 P 1559 3080 4 P 1559 4081 ⁽³⁾		3 P 1509 3080 ⁽⁶⁾ 4 P 1509 4080 ⁽⁶⁾								
	4 P	1563 4080 ⁽¹⁾	1573 4080												
1000 A	3 P	1563 3100	1573 3100												
	4 P	1563 4100 ⁽¹⁾	1573 4100												
1250 A	3 P	1563 3120	1573 3120	4109 0120	3 P 1559 3120 4 P 1559 4121 ⁽³⁾										
	4 P	1563 4120 ⁽¹⁾	1573 4120												
1600 A	3 P	1563 3160	1573 3160	4109 0160	3 P 1559 3160 4 P 1559 4161 ⁽³⁾								1509 3160 ⁽⁶⁾		
	4 P	1563 4160 ⁽¹⁾	1573 4160										1509 4160 ⁽⁶⁾		
2000 A	3 P	1563 3200	1573 3200												
	4 P	1563 4200	1573 4200												
2500 A	3 P	1563 3250	1573 3250	⁽²⁾	3 P 1559 3200 4 P 1559 4201 ⁽³⁾										
	4 P	1563 4250	1573 4250												
3200 A	3 P	1563 3320	1573 3320												
	4 P	1563 4320	1573 4320												

* (ATS) Enclosed Automatic Transfer Switch.

** 1 required per pole.

(1) Available enclosed (see pages 504 "Enclosed changeover switches").

(2) See page 317 "Copper bars connection kits".

(3) Neutral on the left (on the right, see page 318).

(4) To shroud front switch top and bottom 2 references required.

(5) To fully shroud front, rear, top and bottom 4 references required.

(6) To shroud front switch top and bottom 1 references required.

ATyS 6* (continued)

Rating (A)	No. of poles	ATyS 6e	ATyS 6m	Auxiliary contacts	Voltage transformer 400/230 VAC	DC power supply	Padlockable handle	Key handle interlocking system	Door protective surround	Mounting spacers						
125 A	3 P	1563 3012	1573 3012	1599 0002 ⁽²⁾	1599 4063	12 VDC / 230 VAC 1599 5012 24 VDC / 230 VAC 1599 5112	1599 0003 ⁽²⁾	1509 1006 ⁽²⁾	1539 0012	1509 0001						
	4 P	1563 4012 ⁽¹⁾	1573 4012													
160 A	3 P	1563 3016	1573 3016													
	4 P	1563 4016 ⁽¹⁾	1573 4016													
250 A	3 P	1563 3025	1573 3025													
	4 P	1563 4025 ⁽¹⁾	1573 4025													
400 A	3 P	1563 3040	1573 3040													
	4 P	1563 4040 ⁽¹⁾	1573 4040													
630 A	3 P	1563 3063	1573 3063													
	4 P	1563 4063 ⁽¹⁾	1573 4063													
800 A	3 P	1563 3080	1573 3080								1599 0032 ⁽²⁾	1599 4120	1599 0004 ⁽²⁾	1509 1004 ⁽²⁾	1539 0080	
	4 P	1563 4080 ⁽¹⁾	1573 4080													
1000 A	3 P	1563 3100	1573 3100													
	4 P	1563 4100 ⁽¹⁾	1573 4100													
1250 A	3 P	1563 3120	1573 3120													
	4 P	1563 4120 ⁽¹⁾	1573 4120													
1600 A	3 P	1563 3160	1573 3160													
	4 P	1563 4160 ⁽¹⁾	1573 4160													
2000 A	3 P	1563 3200	1573 3200	included	1599 4200											
	4 P	1563 4200	1573 4200													
2500 A	3 P	1563 3250	1573 3250													
	4 P	1563 4250	1573 4250													
3200 A	3 P	1563 3320	1573 3320													
	4 P	1563 4320	1573 4320													

* (ATS) Enclosed Automatic Transfer Switch.

(1) Available enclosed (see pages 504 "Enclosed changeover switches").

(2) Factory fitted.

Other products

Make before break motorised changeover switch (overlapping contact).



aty6_003_a_1_cat

Function

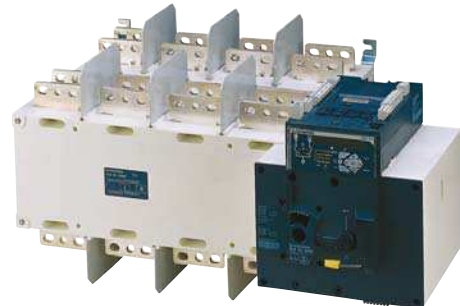
They provide switching, uninterrupted low voltage source inversion and safety isolation. They are intended to be coupled with a UPS (I, I+II, II).

General characteristics

- For ratings from 125 to 1800 A, 3 and 4 pole.
- 3 stable positions (I - I+II - II).
- Automatic on-load switching and source changeover without interruption with a UPS.
- Manual emergency operation.
- Padlocking in 3 positions.

Consult us

Motorised mixed pole changeover switches



aty6_725_a_1_cat

Function

They provide switching and source inversion for low voltage sources of different power ratings.

General characteristics

1250 to 3200 A ratings, 3 and 4 pole.

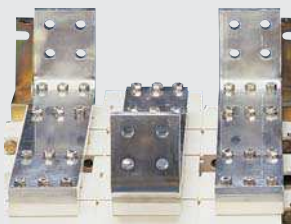
Consult us

⇒ Accessories

Bridging bars



access_205_a_2_cat



access_041_a_1_cat

Use

To provide common point on either incoming or outgoing terminals.

Rating (A)	Section (mm)	Reference
125 ... 160	20 x 2.5	4109 0019
250	25 x 2.5	4109 0025
400	32 x 5	4109 0039
630	50 x 5	4109 0063
800 ... 1000	50 x 6	4109 0080
1250	60 x 8	4109 0120
1600 ... 1800	90 x 10	4109 0160

Copper bars connection kits

Fig.1

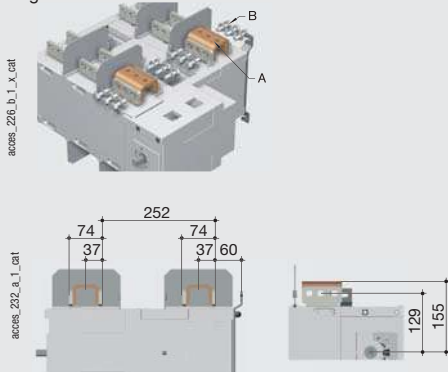


Fig. 2

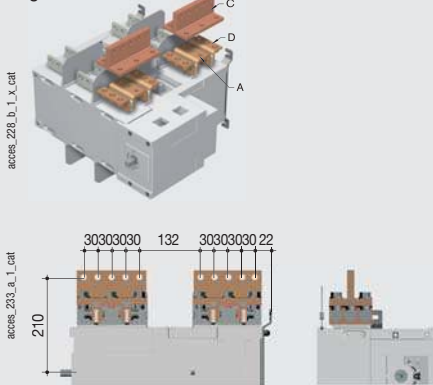
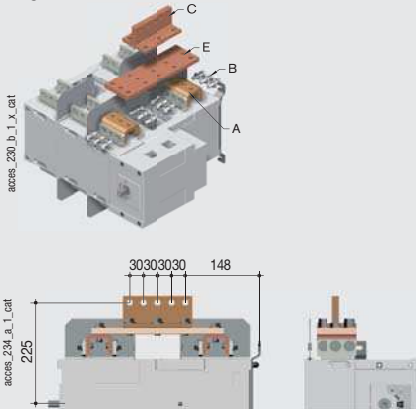


Fig. 3



Use

Enables:
 - Connection between the two power terminals from the same pole for 2000 to 3200 A ratings (Fig. 1 and Fig 2).
 - Top or bottom bridging connection (Fig. 3).

For 3200 A rating, the connection piece (part A) are delivered bridged from factory.
 Bolt sets must be ordered separately.
 Technical notice for these specific accessories can be download from www.socomec.com

Top or bottom flat connection - Fig. 1

Rating (A)	Piece	Quantity to order per pole ⁽¹⁾	Reference
2 000 ... 2 500	Connection - part A	2	2619 1200
2 000 ... 2 500	Bolt set - part B	2	2699 1200
3 200	Connection - part A		included
3 200	Bolt set - part B	2	2699 1200

Top or bottom edgewise connection - Fig. 2

Rating (A)	Piece	Quantity to order per pole ⁽¹⁾	Reference
2 000 ... 2 500	Connection - part A	2	2619 1200
2 000 ... 2 500	T piece - part C	2	2629 1200 ⁽²⁾
2 000 ... 2 500	Right angle - part D	2	2639 1200 ⁽²⁾
3 200	Connection - part A		included
3 200	T piece - part C	2	2629 1200 ⁽²⁾
3 200	Right angle - part D	2	2639 1200 ⁽²⁾

Top or bottom bridging connection - Fig. 3

Rating (A)	Piece	Quantity to order per pole ⁽¹⁾	Reference
2 000 ... 2 500	Connection - part A	2	2619 1200
2 000 ... 2 500	Bolt set - part B	2	2699 1200
2 000 ... 2 500	Bar - piece E	1	4109 0250 ⁽²⁾
2 000 ... 2 500	T piece - part C	1	2629 1200 ⁽²⁾
3 200	Connection - part A		included
3 200	Bolt set - part B	2	2699 1200
3 200	Bar - piece E	1	4109 0320 ⁽²⁾
3 200	T piece - part C	1	2629 1200 ⁽²⁾

(1) Example for 3 pole device equipped upstream only; order 3 times the indicated quantities.
 (2) Bolt set is provided with the accessories.

Control voltage transformer

Use

Enables a 230 VAC device to be supplied with 400 VAC.

Rating (A)	Reference
125 ... 630	1599 4063
800 ... 1800	1599 4120
2000 ... 3200	1599 4200

DC power supply

Use

Allows standard ATyS 3 or ATyS 6 to be DC power supplied.
 To be positioned as close as possible to DC power supply source.

Rating (A)	Operating voltage	Reference
125 ... 1800	12 VDC / 230 VAC	1599 5012
125 ... 1800	24 VDC / 230 VAC	1599 5112

Mounting spacers



atys_00b_a_2_cat

Use

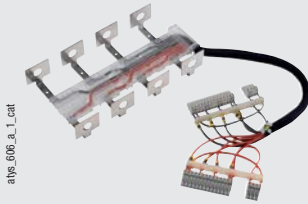
Raises the device's terminals 10mm away from the bottom of the enclosure or frame on which the device is mounted.

This may also be used to replace the original mounting spacers.

Rating (A)	Description of accessories	Reference
125 ... 630	1 set of 2 spacers	1509 0001

Voltage sensing and power supply kit

From 125 to 630 A.



atys_60b_a_1_cat

From 800 to 3200 A.



atys_60b_a_2_cat

Use

For ATyS 6 power supply and voltage measurement (4 wires, three phase). Routing of the conductors is controlled, which means that no specific protective device is necessary for these connections.

The kit can be fitted on the top or bottom of the switch.

Note: the 3-pole version does not integrate the power supply.

From ATyS 6 - 3 pole

Rating (A)	Reference
125 ... 160	1559 3012
250	1559 3025
400	1559 3040
630	1559 3063
800 ... 1000	1559 3080
1250	1559 3120
1600	1559 3160
2000 ... 3200	1559 3200

From ATyS 6 - 4 pole

Rating (A)	Neutral on the right	Neutral on the left
	Reference	Reference
125 ... 160	1559 4012	1559 4013
250	1559 4025	1559 4026
400	1559 4040	1559 4041
630	1559 4063	1559 4064
800 ... 1000	1559 4080	1559 4081
1250	1559 4120	1559 4121
1600	1559 4160	1559 4161
2000 ... 3200	1559 4200	1559 4201

Plug-in optional modules



atys_016_a_1_cat

Use

N°1 - communication module

Control and state feedback of the changeover switch via a 2 or 3-wire RS485 link with JBUS/MODBUS protocol® and transmission speed up to 38 400 baud.

No. 2 - module with 2 inputs / 2 outputs

- On ATyS 3e
 - 2 inputs: changeover control + backup network availability;
 - 2 outputs: a load shedder relay + fault relay.
- On ATyS 6e and 6m, 2 inputs / 2 programmable outputs.

Description of accessories	Reference
RS485 MODBUS (N°1)	1599 2000
2 inputs/2 outputs (N°2)	1599 2001

Terminal shrouds



aces_20b_a_2_cat

Use

Protection IP2X against direct contact with terminals or connecting parts.

Advantages

Perforations allowing remote thermographic inspection without removal.

Rating (A)	No. of poles	Position	Reference
125 ... 160	3 P	top / bottom / front (I) / rear (II)	2694 3014 ⁽¹⁾⁽²⁾
125 ... 160	4 P	top / bottom / front (I) / rear (II)	2694 4014 ⁽¹⁾⁽²⁾
250 ... 400	3 P	top / bottom / front (I) / rear (II)	2694 3021 ⁽¹⁾⁽²⁾
250 ... 400	4 P	top / bottom / front (I) / rear (II)	2694 4021 ⁽¹⁾⁽²⁾
630	3 P	top / bottom / front (I) / rear (II)	2694 3051 ⁽¹⁾⁽²⁾
630	4 P	top / bottom / front (I) / rear (II)	2694 4051 ⁽¹⁾⁽²⁾

(1) To shroud front switch top and bottom 2 references required.

(2) To fully shroud front, rear, top and bottom 4 references required.

Terminal screens

access_207_a_2_cat



Use

Top or bottom protection against direct contact with terminals or connection parts.

Rating (A)	No. of poles	Position	Reference
125 ... 160	3 P	top / bottom	1509 3012
125 ... 160	4 P	top / bottom	1509 4012
250 ... 400	3 P	top / bottom	1509 3025
250 ... 400	4 P	top / bottom	1509 4025
630	3 P	top / bottom	1509 3063
630	4 P	top / bottom	1509 4063
800 ... 1 250	3 P	top / bottom	1509 3080
800 ... 1 250	4 P	top / bottom	1509 4080
1600 ... 1800	3 P	top / bottom	1509 3160
1600 ... 1800	4 P	top / bottom	1509 4160
2000 ... 3200	3 P	top / bottom	1509 3200
2000 ... 3200	4 P	top / bottom	1509 4200

Auxiliary contacts

access_006_a_1_cat



Use

Pre breaking and signalling of positions I and II: 1 extra NO / NC auxiliary contact in each position (factory fitted).

Low level auxiliary contacts : Consult us.

For ATyS 3s

Rating (A)	Reference
125 ... 630	1599 1002
800 ... 1800	1599 1032

For ATyS 3e, 6e and 6m

Rating (A)	Reference
125 ... 630	1599 0002
800 ... 1600	1599 0032
2000 ... 3200	included

Padlocking in the 3 positions I-0-II

atys_125_a_1_cat



Use

Allows padlocking of the operation in the 3 positions I, 0 and II (factory fitted).

Rating (A)	Reference
125 ... 630	1599 0003
800 ... 3200	1599 0004

Key handle interlocking accessories

atys_101_a_1_cat



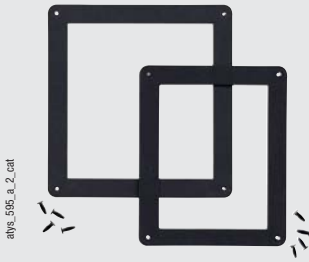
Use

Locking the electrical control and the backup control in position 0 using a RONIS EL11AP lock (factory fitted).

As standard, locking in position 0. Optional padlocking in 3 positions: Locking in position I, 0 or II

Rating (A)	Reference
125 ... 630	1509 1006
800 ... 3200	1509 1004

Door protective surround



aty_s55_a_2_cat

Use

Door finishing surround for protecting ATyS application.

For ATyS 3s

Rating (A)	Reference
125 ... 630	1529 0012
800 ... 1800	1529 0080

For ATyS 3e, 6e and 6m

Rating (A)	Reference
125 ... 630	1539 0012
800 ... 3200	1539 0080

Remote control interfaces for ATyS 6e, 6m and C30



aty_s64_c_1_cat



aty_s65_c_1_cat

Use

To display source availability and changeover state on the front of a panel. Interfaces are self powered from the ATyS. Maximum connection distance: 3 m.

ATyS D20

In addition to the ATyS D10 allows displays, operation and configuration on the cabinet front panel. Protection degree: IP21.

ATyS D10

To display source availability and changeover state on the cabinet front panel. Protection degree: IP21.

Door mounting

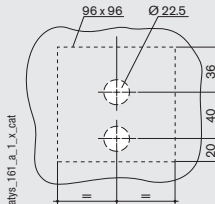
2 holes Ø 22.5. ATyS connection via RJ45 cable, not isolated. Cable not provided.

Interfaces are self powered from the ATyS.

Drillings



aty_s67_a_1_cat



aty_s68_a_1_x_cat

Description of accessories

Description of accessories	Reference
ATyS D10	1599 2010
ATyS D20	1599 2020

Connecting cable for remote interfaces



access_209_a_2_cat

Use

To connect between a remote interface (D10 or D20) and a control product (C30 or ATyS 6e or 6m).

Characteristics

RJ45 8 straight non insulated wires, length 3m.

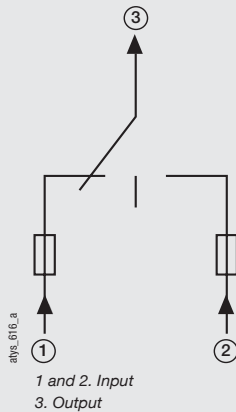
For ATyS 6e, 6m and C30

Type	Length	Reference
RJ45 cable	3 m	1599 2009

Double power supply - DPS



aty_s612_a_2_cat



Use

Allows an ATyS 3s to be supplied by two 230 VAC 50/60Hz networks.

Input

- The input is considered as "active" from 200 VAC.
- Maximum voltage: 288 VAC.
- Internal protection: fuse protected 3.15 A
- Terminal connections: max. 6 mm².
- Modular device: 4 modules width.

Input 1	Input 2	Output
230 VAC	0 VAC	230 VAC (Input 1)
0 VAC	230 VAC	230 VAC (Input 2)
230 VAC	230 VAC	230 VAC (Input 1)
0 VAC	0 VAC	0 VAC

Description of accessories

Description of accessories	Reference
	1599 4001

➔ Characteristics according to IEC 60947-3 and IEC 60947-6-1

125 to 1000 A

Thermal current I_{th} (40°C)	125 A	160 A	250 A	400 A	630 A	800 A	1 000 A
Rated insulation voltage U_i (V)	800	800	800	800	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8	12	12	12

Rated operational currents I_e (A) according to IEC 60947-3

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-21 A / AC-21 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000
415 VAC	AC-22 A / AC-22 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000
415 VAC	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	500/500	800/800	1000/1000
690 VAC ⁽²⁾	AC-20 A / AC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000
690 VAC ⁽²⁾	AC-21 A / AC-21 B	125/125	160/160	200/250	200/250	500/500	800/800	800/800
690 VAC ⁽²⁾	AC-22 A / AC-22 B	125/125	125/125	125/160	125/160	315/315	800/800	800/800
690 VAC ⁽²⁾	AC-23 A / AC-23 B	63/80	63/80	100/125	100/125	160/200	200/250	200/250
220 VDC	DC-20 A / DC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000
220 VDC	DC-21 A / DC-21 B	125/125	160/160	250/250	250/250	630/630	800/800	1000/1000
220 VDC	DC-22 A / DC-22 B	125/125	160/160	250/250	250/250	500/500	800/800	1000/1000
220 VDC	DC-23 A / DC-23 B	125/125	125/125	200/200	200/200	500/500	800/800	1000/1000
440 VDC	DC-20 A / DC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000
440 VDC	DC-21 A / DC-21 B	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾
440 VDC	DC-22 A / DC-22 B	125 ⁽³⁾ /125 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾
440 VDC	DC-23 A / DC-23 B	125 ⁽⁴⁾ /125 ⁽⁴⁾	125 ⁽⁴⁾ /125 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	500 ⁽⁴⁾ /500 ⁽⁴⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾

Rated operational currents I_o (A) according to IEC 60947-6-1

415 VAC	AC - 31 B	125	160	250	400	630	800	1 000
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Overload capacity

Rated short-time withstand current 1 s. I_{sw} (kA eff.)	7	7	9	9	13	26	35
Short-circuit making capacity (kA peak) ⁽⁵⁾	20	20	30	30	45	55	80
Prospective short-circuit (kA rms) ⁽⁵⁾	100	100	50	18	70	50	100
Associated fuse rating (A) ⁽⁵⁾	125	160	250	400	630	800	1000

Connection

Minimum Cu cable section (mm ²)	35	50	95	185	2 x 150	2 x 185	2 x 240
Minimum Cu busbar section (mm ²)					2 x 30 x 5	2 x 40 x 5	2 x 50 x 5
Maximum Cu cable section (mm ²)	50	95	150	240	2 x 300	2 x 300	4 x 185
Maximum Cu busbar width (mm)	25	25	32	32	50	63	63
Tightening torque min / max (Nm)	9/13	9/13	20/26	20/26	20/26		

Switching time (Standard setting)

I - II or II - I (s) ⁽⁶⁾	0.75	0.75	1.3	1.3	1.3	2.6	2.6
I - 0 or II - 0 (s) ⁽⁶⁾	0.45	0.45	0.85	0.85	0.85	1.6	1.6
Duration of "electrical blackout" I - II (s)	0.3	0.3	0.6	0.6	0.6	1.5	1.5

Power supply

Power supply 230 VAC min / max (VAC)	176/288	176/288	176/288	176/288	176/288	176/288	176/288
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Control supply power demand

Supply 230 VAC inrush / nominal (VA)	420/80	420/80	420/100	420/100	420/110	450/120	450/120
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Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000	8 000	8 000	5 000	4 000	4 000
Weight of 3 P switch (ATyS 3) (kg)	3.2	3.3	3.7	4.7	5.2	19.6	23.1
Weight of 4 P switch (ATyS 3) (kg)	3.3	3.4	3.8	5.2	5.7	23.1	24.6
Weight of 3 P switch (ATyS 6) (kg)	4	4.1	4.5	5.5	6	20.4	23.9
Weight of 4 P switch (ATyS 6) (kg)	4.1	4.2	4.6	6	6.5	23.9	25.4

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

(3) 3-pole device with 2 poles in series for the "+" and 1 pole for the "-".

(4) 4-pole device with 2 poles in series by polarity.

(5) For a rated operational voltage $U_o = 400$ VAC.

(6) Between the command given and arrival in position at U_n (under nominal conditions).

1 250 to 3 200 A

Thermal current I_{th} (40°C)	1 250 A	1 600 A	1 800 A	2 000 A	2 500 A	3 200 A
Rated insulation voltage U_i (V)	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)	12	12	12	12	12	12

Rated operational currents I_e (A) according to IEC 60947-3

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-21 A / AC-21 B	1250/1250	1600/1600	1800/1800	-/2000	-/2500	-/3200
415 VAC	AC-22 A / AC-22 B	1250/1250	1600/1600	1800/1800	-/2000	-/2500	-/3200
415 VAC	AC-23 A / AC-23 B	1250/1250	1250/1250	1250/1250	-/1600	-/1600	-/1600
690 VAC ⁽²⁾	AC-20 A / AC-20 B	1250/1250	1600/1600	1800/1800			
690 VAC ⁽²⁾	AC-21 A / AC-21 B	800/800	1000/1000	1000/1000			
690 VAC ⁽²⁾	AC-22 A / AC-22 B	800/800	1000/1000	1000/1000			
690 VAC ⁽²⁾	AC-23 A / AC-23 B	200/250	500/500	500/500			
220 VDC	DC-20 A / DC-20 B	1250/1250	1600/1600	1800/1800			
220 VDC	DC-21 A / DC-21 B	1250/1250	1250/1250	1250/1250			
220 VDC	DC-22 A / DC-22 B	1250/1250	1250/1250	1250/1250			
220 VDC	DC-23 A / DC-23 B	1250/1250	1250/1250	1250/1250			
440 VDC	DC-20 A / DC-20 B	1250/1250	1600/1600	1800/1800			
440 VDC	DC-21 A / DC-21 B	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾			
440 VDC	DC-22 A / DC-22 B	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾			
440 VDC	DC-23 A / DC-23 B	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾	1250 ⁽³⁾ /1250 ⁽³⁾			

Rated operational currents I_s (A) according to IEC 60947-6-1

415 VAC	AC - 31 B	1 250	1 600	1800	2 000	2 500	3 200
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Overload capacity

Rated short-time withstand current 1 s. I_{cw} (kA eff.)	35	50	50	55	55	55
Rated peak withstand current (kA peak) ⁽⁴⁾	80	110	110	120	120	120
Prospective short-circuit (kA rms) ⁽⁴⁾	100	100	100			
Associated fuse rating (A) ⁽⁴⁾	1250	1600	1800			

Connection

Minimum Cu busbar section (mm ²)	2 x 60 x 5	2 x 80 x 5	3 x 100 x 5	2 x 100 x 10	2 x 100 x 10	2 x 100 x 10
Maximum Cu cable section (mm ²)	4 x 185	6 x 185	6 x 185			
Maximum Cu busbar width (mm)	63	100	100	100	100	100
Tightening torque min / max (Nm)	20/26	40/45	40/45	40/45	40/45	40/45

Switching time (Standard setting)

I - II or II - I (s) ⁽⁵⁾	2.6	2.6	2.6	2	2	2
I - 0 or 0 (s) ⁽⁵⁾	1.6	1.6	1.6	1	1	1
Duration of "electrical blackout" I - II (s)	1.5	1.6	1.6	1	1	1

Power supply

Power supply 230 VAC min / max (VAC)	176/288	176/288	176/288	176/288	176/288	176/288
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Control supply power demand

Supply 230 VAC inrush / nominal (VA)	450/120	450/120	450/120	550/390	550/390	550/390
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Mechanical characteristics

Durability (number of operating cycles)	4 000	3 000	3 000	3 000	3 000	3 000
Weight of 3 P switch (ATyS 3) (kg)	24.6	36.1	36.1	47	51	59
Weight of 4 P switch (ATyS 3) (kg)	29.6	42.1	42.1	57	61	69
Weight of 3 P switch (ATyS 6) (kg)	25.4	36.9		47	51	59
Weight of 4 P switch (ATyS 6) (kg)	30.4	42.9		57	61	69

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

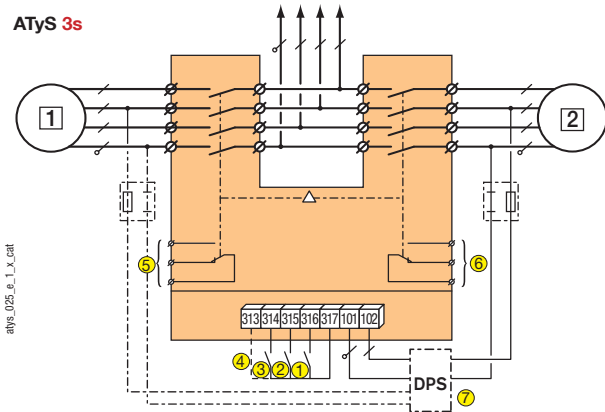
(3) 4-pole device with 2 poles in series by polarity.

(4) For a rated operational voltage $U_s = 400$ VAC.

(5) Between the command given and arrival in position at U_s (under nominal conditions).

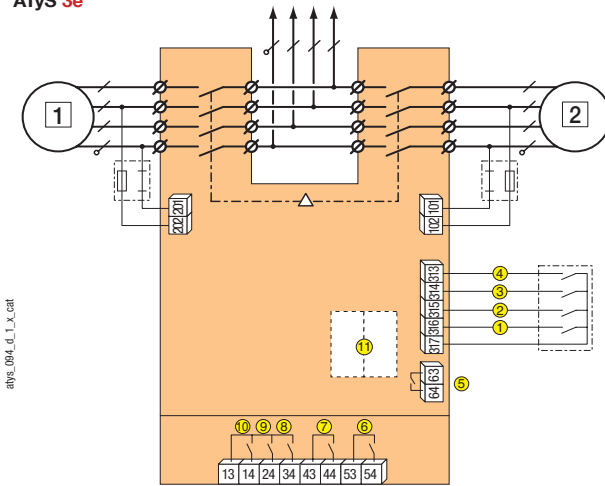
➤ Terminals and connections

ATyS 3s



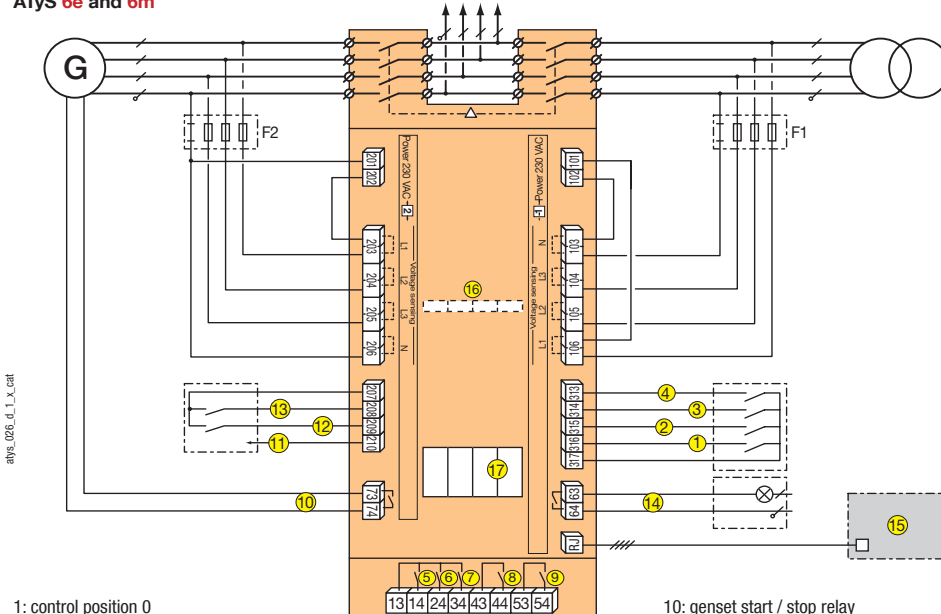
- 1 preferred source
- 2 alternate source
- 1: control position 0
- 2: control position I
- 3: control position II
- 4: configuration of the control logic
- 5: NO/NC position and prebreaking contact for position I
- 6: NO/NC position and prebreaking contact for position II
- 7: Double Power Supply (accessory)

ATyS 3e



- 1 preferred source
- 2 alternate source
- 1: control position 0
- 2: control position I
- 3: control position II
- 4: inhibition of the control position
- 5: fault relays
- 6: auxiliary contact, closed when the switch is padlocked
- 7: auxiliary contact, closed when the switch is in "AUT" mode
- 8: auxiliary contact, closed when the switch is in position 0
- 9: auxiliary contact, closed when the switch is in position II
- 10: auxiliary contact, closed when the switch is in position I
- 11: slots for optional modules

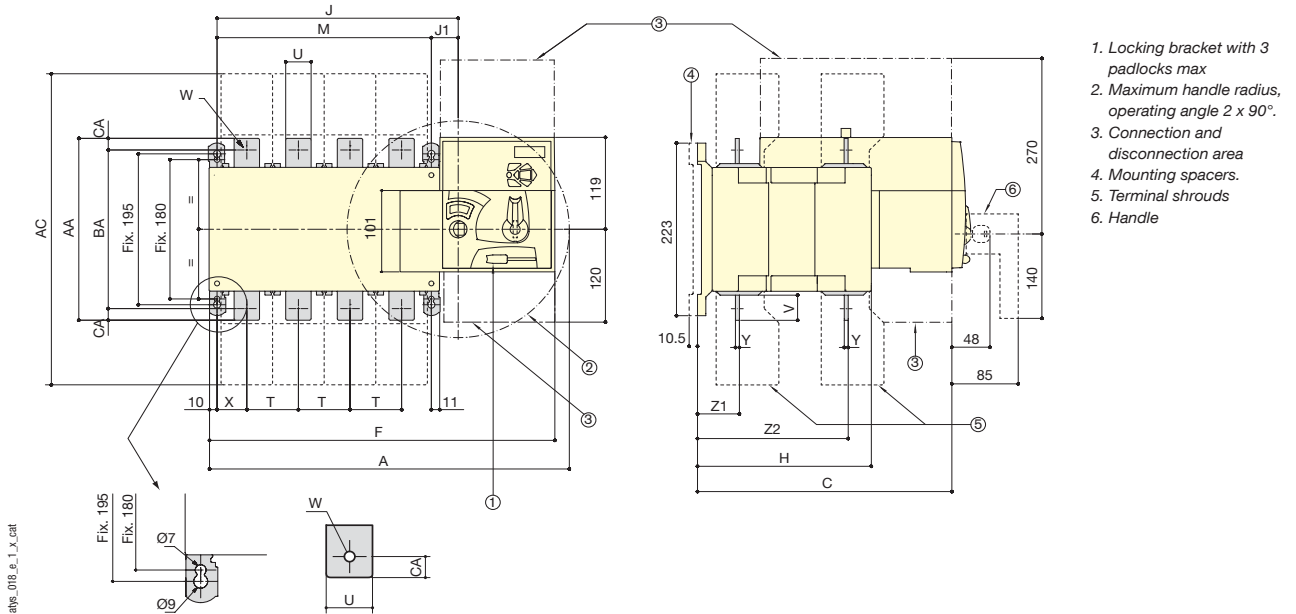
ATyS 6e and 6m



- 1: control position 0
- 2: control position I
- 3: control position II
- 4: remote command
- 5: auxiliary contact, closed when the switch is in position I
- 6: auxiliary contact, closed when the switch is in position II
- 7: auxiliary contact, closed when the switch is in position 0
- 8: auxiliary contact, closed when the switch is in "AUT" mode
- 9: auxiliary contact, closed when the switch is padlocked
- 10: genset start / stop relay
- 11: auxiliary power supply (for optional modules control)
- 12: remote "test on-load" input
- 13: DTT inhibit input. Transfer initiated as soon as the input is closed when DTT = max. value.
- 14: fault relay
- 15: remote control interface
- 16: current transformers (ATyS 6m only)
- 17: slots for optional modules

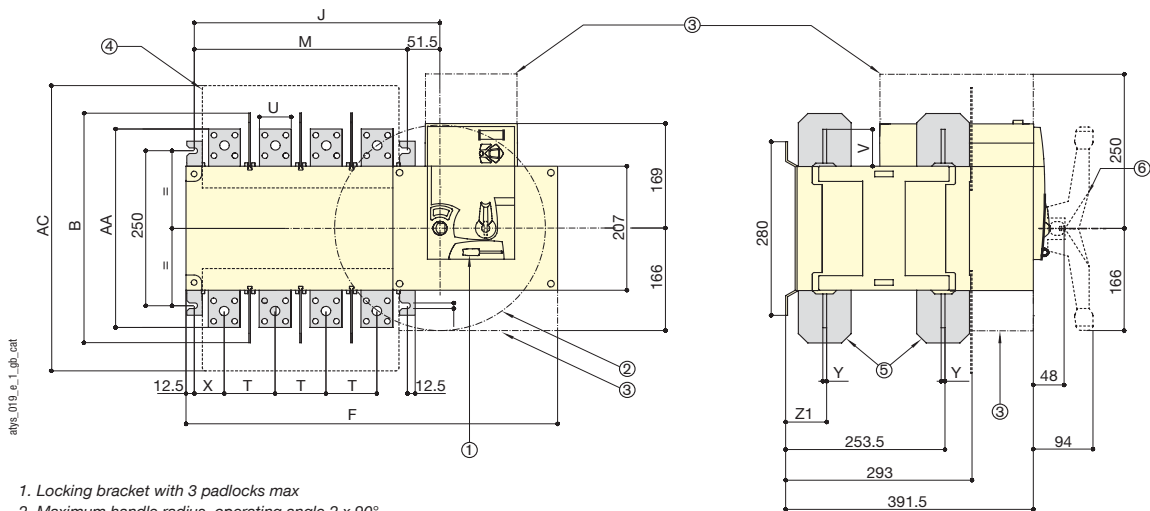
➔ ATyS - Dimensions

ATyS 125 to 630 A



Rating (A)	Overall dimensions			Terminal shrouds AC	Switch body					Switch mounting		Connection												
	A 3p.	A 4p.	C		F 3p.	F 4p.	H	J 3p.	J 4p.	J1	M 3p.	M 4p.	T	U	V	W	X 3p.	X 4p.	Y	Z1	Z2	AA	BA	AC
125	304	340	244	235	286.5	322.5	151	154	184	34	120	150	36	20	25	9	28	22	3.5	38	134	135	115	10
160	304	340	244	235	286.5	322.5	151	154	184	34	120	150	36	20	25	9	28	22	3.5	38	134	135	115	10
250	345	395	244.5	280	328	378	153	195	245	35	160	210	50	25	30	11	33	33	3.5	39.5	134.5	160	130	15
400	345	395	244.5	280	328	378	153	195	245	35	160	210	50	35	35	11	33	33	3.5	39.5	134.5	170	140	15
630	394	459	320.5	400	377	437	221	244	304	34	210	270	65	45	50	13	42.5	37.5	5	53	190	260	220	20

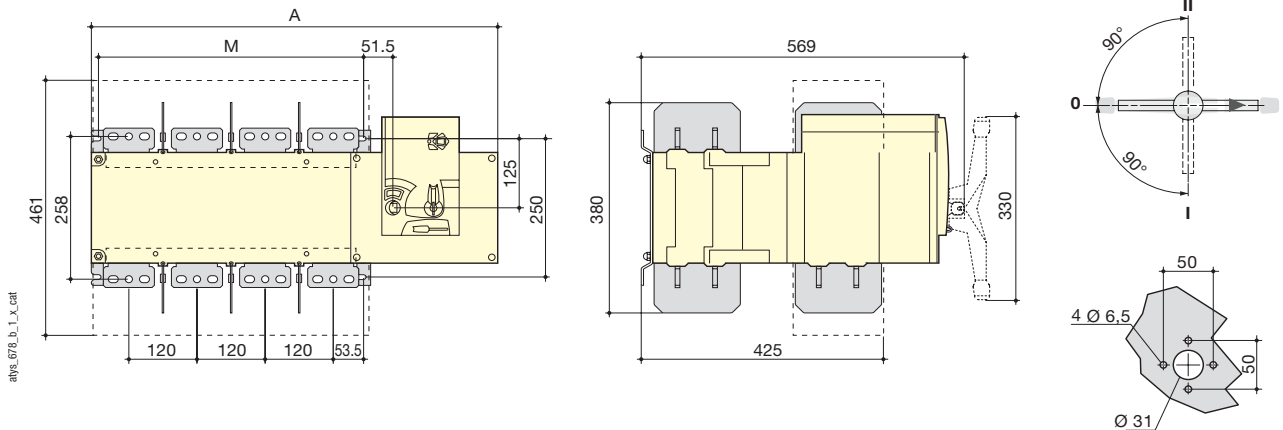
ATyS 800 to 1800 A



1. Locking bracket with 3 padlocks max
2. Maximum handle radius, operating angle 2 x 90°.
3. Connection and disconnection area
4. Terminals protection screen
5. Inter phase barrier.
6. Handle

Rating (A)	Overall dimensions B	Terminal shrouds AC	Switch body				Switch mounting		Connection						AA
			F 3p.	F 4p.	J 3p.	J 4p.	M 3p.	M 4p.	T	U	V	X	Y	Z1	
800	370	461	504	584	306.5	386.5	255	335	80	50	60.5	60	7	66.5	321
1000	370	461	504	584	306.5	386.5	255	335	80	50	60.5	60	7	66.5	321
1250	370	461	504	584	306.5	386.5	255	335	80	60	65	60	7	66.5	330
1600	380	481	596	716	398.5	518.5	347	467	120	90	44	66	8	67.5	288
1800	380	481	596	716	398.5	518.5	347	467	120	90	44	66	8	67.5	288

ATyS 2000 to 3200 A



Rating (A)	Overall dimensions		Switch mounting	
	A 3p.	A 4p.	M 3p.	M 4p.
2 000 ... 3 200	596	716	347	467

➤ Cut of dimensions

ATyS 125 to 630 A

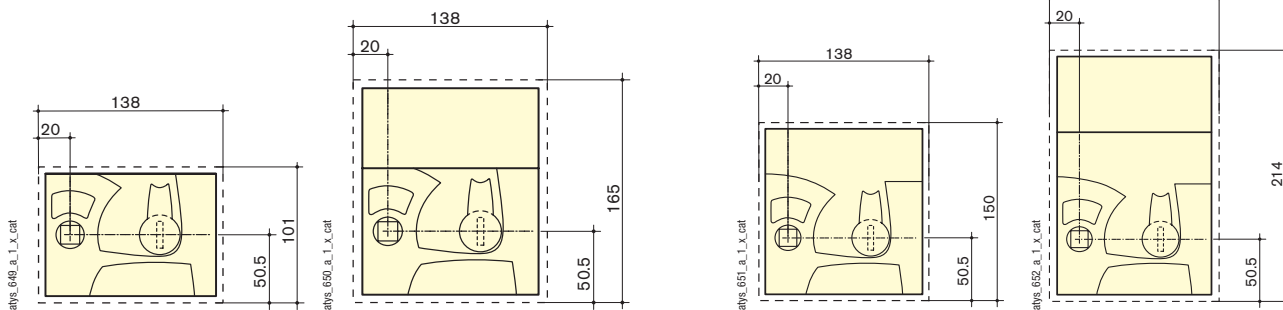
ATyS 3s

ATyS 3e, 6e, 6m

ATyS 800 to 1800 A

ATyS 3s

ATyS 3e, 6e, 6m

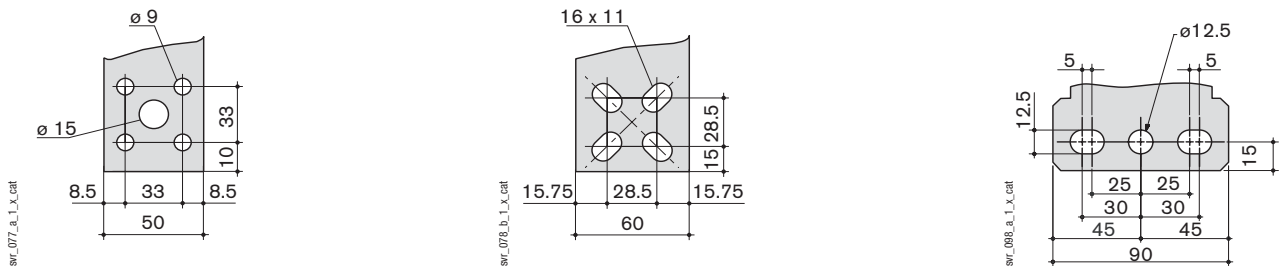


➤ Connection terminals

ATyS 800 to 1000 A

ATyS 1250 A

ATyS 1600 to 3200 A



ATyS C30 / ATyS C40

Control relays



➤ Applications

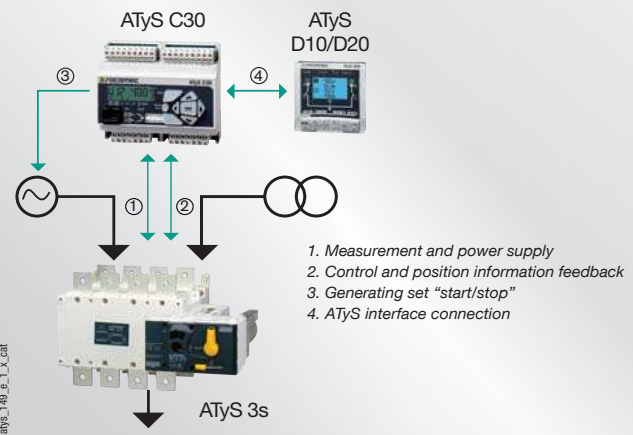
ATyS C30

➤ Function

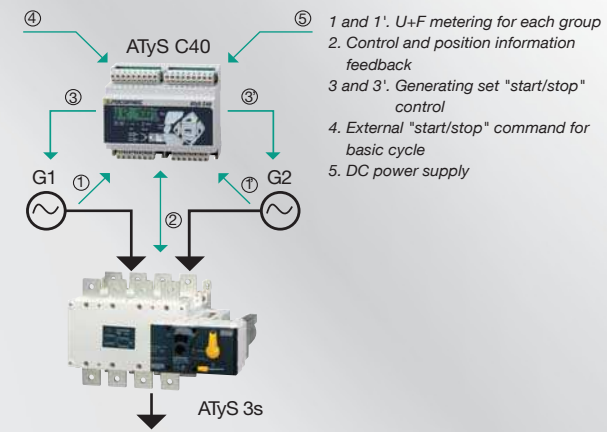
ATyS C30 / C40 allows any type of motorized changeover control: ATyS and ATyS M, contactors, circuit breakers or other motorised switches.

➤ Conformity to standards

- IEC 61010-1
- IEC 61000-4-2
- IEC 61000-4-3
- IEC 61000-4-4
- IEC 61000-4-5
- IEC 61000-4-6
- IEC 61000-4-8
- IEC 61000-4-11
- IEC 60068-2-6
- IEC 60068-2-11
- IEC 60068-2-30



ATyS C40



➤ General characteristics

- Modular design (6 modules).
- DIN rail mounting.
- 2 output relays for changeover control.

ATyS C30

- ATyS D10 or D20 connection.
- Inputs for auxiliary position contacts.
- Metering 3U on network 1.
- Metering 1U on network 2.
- 2 programmable inputs for the following functions: test, loss of a network, remote starting/stopping.
- 2 programmable inputs for the following functions: information transfer, circuit breaker control.

ATyS C40

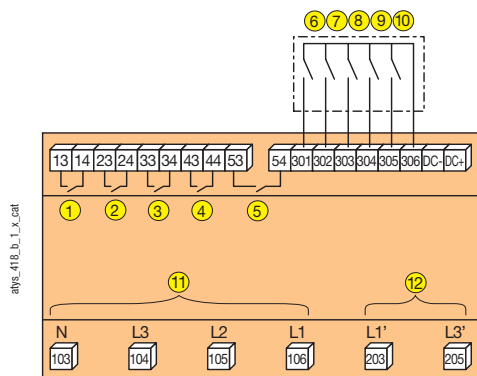
- Dual gensets controller with a redundant genset application cycle (basic cycle).
- Single phase sensing on Gen1 & Gen 2.
- 3 programmable inputs for the following functions: test, loss of a network, remote starting/stopping.
- 1 programmable input for the following functions: information transfer, circuit breaker control.
- 2 start Gen contacts (Gen1 & Gen2).

➤ Electrical characteristics

Supplied from measurement circuit	110 ... 400 VAC
DC power supply	< 9 ... 30 VDC
Measurement range	110 ... 400 VAC / ± 10 %
Frequency	50/60 Hz
Accuracy	± 1 %

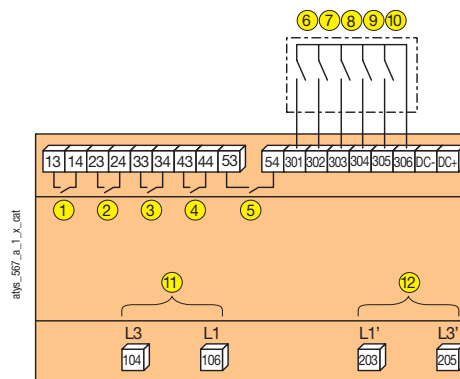
➤ Terminals

ATyS C30



- | | |
|-------------------------------------|--------------------------------------------------------|
| 1. Generator 1 start / stop control | 8. AC 2: auxiliary contact position 2 |
| 2. Pos 1: power component control | 9. I1: programmable input |
| 3. Pos 2: power component control | 10. I2: programmable input |
| 4. O1: programmable output | 11. Source 1: 3 U network measurement and power supply |
| 5. O2: programmable output | 12. Source 2: 1 U network measurement and power supply |
| 6. 1: auxiliary contact position 1 | |
| 7. 0: auxiliary contact position 0 | |

ATyS C40



- | | |
|---------------------------------------|------------------------------------------|
| 1. Generator 1 start / stop control | 7. I3: programmable input |
| 2. Pos 1: power component control | 8. AC 2: auxiliary contact position 2 |
| 3. Pos 2: power component control | 9. I1: programmable input |
| 4. O1: programmable output | 10. I2: programmable input |
| 5. Generator 2 start / stop control | 11. Metering 1U + frequency generator G1 |
| 6. AC 1: auxiliary contact position 1 | 12. Metering 1U + frequency generator G2 |

➤ References



Type	ATyS C30 Reference	ATyS C40 Reference
Supplied from measurement circuit	1599 3030	1599 3040
DC power supply	1599 3031	1599 3040